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PRACTICAL APPLICATIONS OF OSTEOPATHIC HYGIENE

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Osteopathic hygiene implies the normalization of all vital phenomena of the human organism. Vital phenomena have their rise from a physical basis, and because of this fact the study of both gross and histological anatomy, in health and disease, is essential to an intelligent understanding of both physiological and pathological manifestations of life.

Where a variation of function from the normal exists, there is also a corresponding physical defect in anatomy. This defect may be microscopic in its minuteness, but it is nevertheless present. Vital law is just as accurate and just as scientific as physical law. We therefore expect to find corresponding anatomic defects where fluctuation in function constantly takes place. Hulett, in his "Principles of Osteopathy," says: "Disease is normal to the structural condition producing it." and this statement may be verified by investigating histological changes which take place in the tissues and noting the symptomatology which has preceded the autopsy.

If the investigation is made to determine the actual morphological changes which take place in the tissues showing abnormal or modified functions, it will be found that there are well defined structural changes present and that these histological changes in the cells are the real causes of change in function. Charles S. Minot has admirably set forth this principle in his book called, "Age, Growth and Death." This author has examined under the microscope hundreds of specimens of both young and old tissues, and has noticed how change in structure of the cell takes place as age in the animal advances, and has pointed out that function is modified as these structural changes appear.

He points out that the cytoplasm of the cell increases enormously in proportion to the nucleus of the cell as age advances, and that such change in structure is accompanied by change in function, and that these structural changes become so great in old age as to eventually suppress cell functions entirely, which results in death. Minot says:

> At first structure comes as a helpful thing, increasing the usefulness of the part, and then it goes on too far and impairs the usefulness, and at last a stage is produced in which no use is possible any longer—the thing is worthless. * * *
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> Old age differs but little in its cytomorphosis from maturity; maturity differs much from infancy; infancy differs very much indeed from the embryo; but the embryo differs enormously from the germ in its cytomorphic constitution. Cytomorphosis is then a fundafundamental notion. It gives us, in a general law, a comprehensive statement of all the changes which occur in the body. None, in fact, is produced at any period in any of us except in accordance with this general cytomorphic law. There is first the undifferentiated stage, then the progressive differentiation; next there follows the degenerative change ending in death, and last of all the removal of the dead cells. Such we may conveniently designate as the four essential stages of cytomorphosis.

In these cytomorphic changes produced in the celular tissues as the organism ad-

vances in age, are to be found the underlying principles of change in function. It is a law of life which is fundamental, reliable and scientific. The undifferentiated cell is incapable of fulfilling a specific function. It is only by the mysterious process of cell differentiation in which the structure of the cell is modified and constructed for specific function, that the organism becomes capable of manifesting so many different kinds of function in life.

The structure of the cell is constantly changing throughout life, and as a result of this cellular change, the organism shows anatomical change, and functional impairment, as a whole. In old age the stature becomes shortened and stooped; fibrous tissue increases in the walls of the blood vessels, making them sclerotic and inelastic; muscular cells atrophy, and the muscles lose their tonicity; animal matter increases, in the bones, making them more brittle; the heart enlarges; fibrous tissue forms in the walls of the air cells of the lungs and restricts respiration; after maturity the brain steadily diminishes in weight, on up to the end of life.

What a splendid illustration of the relation of structure to function the picture of old age makes for us.

This relation of structure and function is true not only in regard to age, but also in all *diseases* of the organism. The effects of pathogenic bacteria and their excreta upon the body structure are well shown under the microscope. Delafield and Prudden note that:

> When bacteria do enter and grow in the body, the cells and tissues near them may show very marked alterations, due to their influence. The cells may be swollen, and their neuclei may disappear, and the protoplasm may be converted into a mass of shining or coarsely granular particles, or may completely disintegrate. The intercellular substances near the bacteria may also soften and disintegrate. In a word, the tissue in their immediate vicinity is often found in a condition of necrosis of one kind or another.

These pathologists and others have viewed under the microscope these morphological changes in the cells in disease, and these structural changes are always accomplished by constitutional symptoms of rapid pulse, high temperature, loss of appetite, insomnia, headache, general malaise, etc., in these acute infectious diseases, showing the intimate association between structure and function. And such structural changes in the tissues are not confined to any one acute disease, but are found widely distributed, in all acute diseases alike. In pneumonia the invading organism attacks the lungs, in typhoid fever the germ attacks the tissues of the bowel, and so on; but in every instance the invader, by its excretion or otherwise, destroys the structural part of the cell, and by so doing creates abnormal vital function, which we term symptomatology.

But it is not necessary for pathogenic bacteria to invade the body in order for disease to arise. Many diseases have no bacterial origin, yet such diseases furnish abundant evidence of histological changes in the tissues. It is interesting to note in this connection that pathologists cite as causes of cellular pathology, forces within the body itself, which act as causes to change cell structure.

> It should be remembered in this connection that effects closely resembling those due to bacterial or allied poison may be induced by toxic agents developed within the body as a result of defective elimination or faulty cell metabolism—auto-intoxication.—*Delafield and Prudden.*

That the body is constantly creating chemical compounds within itself, which, if retained, produce cellular degeneration, disease, and death, is well known to all physicians. If the kidneys fail to eleminate the toxic substances contained in the blood, uraemic poisoning follows; if the lungs do not eliminate the carbon dioxide constantly arising in the body, asphyxia is a result; if the bile is retained within the system, jaundice follows, etc. There is a constant production of toxic elements arising within the

organism from metabolism. As these toxic substances increase within the organism, whether from lack of elimination, or from lack of neutralization, the vital properties of the cells become fatigued and eventually exhausted. This retention of toxic matter within the cell soon causes retrogressive chemical changes to take place here, and soon there are structural changes sufficiently advanced in the cell to be detected under the microscope. Many chronic diseases have their origin from auto-intoxication of this kind.

Histological changes arising within the tissue cells, whether from senescence, auto-intoxication, traumatic injury, invasion of the organism by pathogenic bacteria, or some other cause, may become so extensive as to involve whole parts of anatomy, in which case the lesion becomes anatomical as well as histological. The anatomical lesion represents a further development in pathology than is found in the histological lesion. The structural condition of the tissues has advanced pathologically from the microscopic to the macroscopic, and is readily detected by palpation.

The anatomical lesion always presents a change in structure from the normal, and this mal-adjustment of structure, as it advances, has power to create more complicated symptomatology, the more extensive the anatomical lesion becomes. Anatomical lesions manifest the aggregated disturbance in function from many cells—the organized, co-operative, summated results of abnormal structural conditions.

The inherent power of all tissues of the body, and especially nerve tissue, to react to mechanical stimulation, offers a satisfactory and scientific explanation of the reason why mal-adjustment of the physical mechanism of the organism disturbs and perverts its own functions. The extensive ramifications of the nervous system throughout the entire organism insures a constant physical contact with other tissues of the body, and when mal-adjustment of structure arises, the nervous system is at once influenced mechanically, and disturbance in function follows. The nervous system constitutes the executive department of the body presiding over all vital functions; therefore, anatomical lesions which disturb the normal functions of the nervous system act directly as causes of disease.

That symptomatology has a physical origin, due to abnormal structural adjustment, is distinctly an osteopathic conception of disease, although the basic principle involved differs in no respect from the great biologic law pertaining to the relation of structure and function in all organisms held by scientists for ages. The osteopathic conception of disease, based upon structural change in the organism, changes radically our conception of treatment of disease. If the mechanism of the body is mal-adjusted to such an extent as to pervert function, then the basic principle of treatment is undoubtedly adjustment of structure.

Normalization of structure precedes normalization of function, therefore it becomes necessary to make physical changes in the organism before change in function can be expected. This is nature's method of modifying function, as we have seen in cell differentiation for specific functioning, in bringing on senescence, etc., and if we are wise we will use the same natural laws of the organism for removing symptomatology and establishing normal functions. *The great question before the osteopathic profession of today is how to normalize the structure of the organism.*

We have a great therapeutic principle here which is distinctly osteopathic and we need the whole brain of our profession to develop this principle and protect it from amalgamation with internal medicine.

Next in importance to that of osteopathic technique, in adjusting anatomical structure and normalizing function, is

that of mechanical and physiological rest. The attention of the osteopathic profession should be called to this therapeutic agent because it is a natural law of all living matter and for this reason should be called into service. I am indebted to the celebrated English surgeon, Dr. John Hilton, author of "Rest and Pain," for many of the succeeding thoughts which I shall present for your consideration.

Osteopathic adjustment of anatomical structure is natural surgery of the organism, and the laws of healing which apply to the tissue following the use of the surgeon's knife are also applicable to repair produced by osteopathic adjustment. One of nature's methods of healing injured and diseased tissues is to secure rest to the parts.

Hilton calls attention to the fact that nature creates a splint for securing rest in injury to serous and mucous surfaces by pouring out lymph, which coagulates at once and produces fixation of the tissues to promote healing. In inflammation of the pleura, or pericardium, lymph is poured out, and by coagulation, produces fixation to prevent friction of the inflamed surfaces. The same process is carried out in inflammation of mucous surfaces. In inflammation of the throat the lymph is poured out on the mucous membrane and acts as a protection to cold air striking this irritable surface, and as this lymph coagulates, it produces physiological rest to the mucous glands lying beneath it. After the glands have had physiological rest for a time, they recover, and then resume their former activity of secretion of mucous, and the membrane that has protected the throat from irritation while physiological rest is secured is pushed off and expectorated. In catarrhal conditions of the bowels, in which there is an active inflammatory process going on, the lymph is poured out over this inflamed membrane and, by coagulation, a fibrous membrane is created which protects the sensitive mucous glands from irritation. After healing of the mucous glands by physiological rest, secured by this fibrous covering of coagulated lymph, there follows active functioning by the mucous cells, and the mucous so formed pushes off the fibrous covering, which is then evacuated in the stool. Often complete cast of the intestinal wall is evacuated.

This principle of fixation of structure to secure physiological rest is carried out still more extensively in wounds and injuries of more severe types, and under such conditions the coagulated lymph is added to in the way of cells and fibrin and new growth of tissue is produced, resulting in adhesions. The osteopathic profession is very familiar with such tissue growth securing fixation of the vertebral, costal, pelvic and other joints of the body, as well as visceral anatomy. Such adhesions are, at the time they are formed, for the purpose of producing fixation of structure in order to secure physiological rest, and to this extent they are very essential, although later, when the necessity for physiological rest is removed, such adhesions may become a deteriment to normal functioning.

Hilton points out the difficulty in healing sub-occipital, cervical, popliteal and other abscesses of the body owing to the fact that such abscesses are constantly irritated by contraction of muscles lying adjacent to them. He calls attention to the fact that many of such ulcers are quickly healed when fixation of the muscles is secured by proper bandaging, etc., to secure rest to the ulcerated areas.

In adjustment of anatomical lesions of structure by osteopathic treatment it may be noticed by the careful clinican that a certain amount of fixation of structure is produced in the organism after corrective treatment. If, after the patient has had a vigorous corrective treatment, he should come for treatment before the reactions from the former treatment have subsided, it will be found that the structure of the body is rigid and more or less immobile, and that a corrective treatment cannot be

administered successfully because of this tenseness and resistance of the tissues. Nature seems to produce fixation of structure, following effective adjustment of anatomy, in order to allow functions to normalize to the structural changes already made. If change in structure produces aberration in function, then it is logical for nature to limit the possible extent of change of structure, in order that function may be maintained at an optimum level. By fixation of structure the vital phenomena of the organism are prohibited from such radical variation from the normal, which restriction contributes to the comfort of the patient, and also establishes a line of safety in change of structure for the organism.

To disregard this subtle law of the organism, in adjusting structure of the body, is to antagonize a force which has power to thwart all our best efforts to normalize function. Our profession cannot improve on the laws of nature, and when we come to the full understanding of this fact it will save us a great deal of embarrassment, and keep us from attempting to cure patients by instantaneous transformations.

The law of fixation of structure to secure rest in order to promote healing is illustrated again in inflammation of joints of the body. Hilton calls attention to this fact and points out how nature imposes rest on the joint by producing continuous muscular contraction of the flexor muscles in order to produce fixation of all joint structures.

So long as the joint is free to move the inflammatory processes do not subside, but on the contrary, are maintained by the action which produces friction, maintains high temperature, and rapid metabolism. With the joint fixed in one position by flexion of the muscles, the irritability of the tissue cells in the joint structure subsides and normal metabolism soon prevails. Mechanical rest is here used to establish and maintain physiological rest in the joint structure by fixation, in order to create a favorable condition for cell repair and growth.

Another illustration of this same law of fixation to secure rest is found in chronic contraction of muscular tissue from excessive use. Prof. Mosso, of the University of Turin, has made an exhaustive study of fatigue in the organism. In his study of muscular contraction he says:

> Too strong a contraction or excessive work will keep the muscle from relaxing completely, and to this condition of abnormal muscular tension the name *contracture* has been given. Contracture as it presents itself physiologically is, therefore, the beginning of a pathological phenomenon. It is therefore worthy of remark that all causes of injury to the muscle tend to maintain it in a state of contraction. Too strong electric shocks, fatigue, some poisons, the arrest of circulation of the blood, all produce contracture and rigidity.

This rigidity and contracture brought on in the muscles of the body by use is for the purpose of creating fixation in the muscles in order to establish physiological rest. A disregard of this law of rest for the tissues leads ultimately to disease. Immobilization of the joints of the spine, pelvis, ribs, etc., is often produced by chronic contracture of the skeletal muscles of the human body, brought on by excessive use.

These facts become of interest to our profession because the various functions of the joints of the spine are closely related, through the nervous system, to the various functions of the viscera of the organism. We have only to remember the relation of the recurrent meningeal nerves to all the spinal joints and the functions of these nerves, to associate joint pathology with visceral symptomatology. The spinal joints are closely connected with visceral life owing to the fact that the nerve supply to visceral life from the central nervous system has its exit from the spinal canal through the foramina of the spinal joints, hence all those conditions which concern the spinal

joints have a direct bearing upon vital phenomena of the organism.

The contraction and rigidity of the spinal muscles from fatigue is for the purpose of creating partial fixation in order to secure physiological rest. To this extent the process is beneficial to the organism, but if this demand for rest is ignored, by not allowing sufficient time for complete relaxation of the muscles, they then go into a state of chronic contracture and become a detriment to the organism by immobolizing the spinal joints to the extent of ultimately perverting visceral functions. Normal tonicity of the skeletal muscles is of very great importance to the organism in maintaining the health of the visceral organs, and we cannot hope to normalize visceral functions so long as the skeletal muscles are chronically contractured by excessive use.

In the temporary splint produced by coagulation of lymph in serous and mucous membranes following injury, in calluses produced in fractures of bones; in adhesions following inflammatory processes; in contractures of exhausted muscles—is found one of the well defined laws of growth.

We are already quite familiar with the principle that change in structure produces change in function, and also with another very closely related fact, which is that, "Disease is normal to the structural condition producing it," as Hulett puts it. Now, the principle of fixation of structure to secure normalization of function is certainly present in all vital substance, and becomes evident to us upon investigation of the facts. This principle of mechanical fixation of structure to secure physiological rest in the tissues is so dominant in the organism, and is produced with such spontaneous vigor, as to become a detriment to the organism in those cases where the necessity for fixation is removed by normalization of function, and where nature is unable to remove this fixation. This very fact, however, emphasizes the necessity for rest to promote healing.

There is a very striking illustration of this principle of rest, or physiological fixation of structure to insure and promote repair and tissue growth, found in the phenomenon of sleep. If we note the changes taking place in the organism at this time, it will be found that all of the vital functions are suppressed to a marked degree, and that structure producing these functions is off duty and at rest, in so far as that is possible in the living organism. In sleep the respiration is slower, the amount of oxygen taken in is much less, and the amount exhaled is considerably less than during waking hours, showing a very great diminution in metabolism. The heart beats slower, blood pressure falls, and the velocity of the blood stream is diminished. Mosso has shown that the peripheral vessels are dilated in sleep and that the arm and leg increase slightly in size from the dilation of the peripheral arterial blood vessels, with a corresponding decrease in amount of blood in the cerebral vessels. The constant secretions, such as the tears, urine, mucous of nose and throat, is also decreased in sleep. The muscles relax and lose much of their tonicity, and the temperature of the body falls, owing to partial suppression of metabolism in the muscles. The patellar reflex is lost, while on the contrary, that of the ocular reflex is increased, the pupil being markedly constricted. The cerebral cortex is largely off duty, there being no conscious appreciation of afferent impulses from stimulation of either the nerves of common or special sensation. Voluntary movements are lost first on going to sleep, and the last impressions to create consciousness are those from the auditory mechanism.

In all the major diseases of the human family, where the great pitched battles between life and death are fought out, nature produces fixation of the organism as a whole by placing the patient on his back in bed, as a means of conserving his

energy to combat the disease and repair the depleted tissues. There can be no question but that rest is one of the great agents used in the organism by nature to normalize structure and function. Among methods for normalizing structure, that of osteopathic technique stands first in importance, although it is an artificial rather than a natural method.

There are very few cases of disease where osteopathic technique may not be employed with benefit to the patient. Many of the laity have not been able to see clearly just how osteopathic treatment can be of any service in acute diseases, yet in such diseases the structural changes are much more numerous and arise with much greater rapidity than in chronic diseases, and for this reason osteopathic treatment is needed here even more than in chronic diseases. In surgical cases the benefits of osteopathic treatment are undoubtedly of great service to the patient, because of the increased facilities through improved circulation, for better drainage of the wound, and also for relieving the nervous system of abnormal stimuli which arise in surgery from muscular contracture, high temperatures, toxins, etc.

The abnormal physical condition of the patient should determine the necessity for treatment, and so far as the writer's experience goes, there has never been a case examined by him presenting a definite symptomatology that has not had well defined anatomical lesions present also. The amount of treatment given the patient is of greatest importance, and should be determined by reactions from treatment, more than from symptomatology, although in acute practice symptoms must receive more careful consideration than in chronic practice. Often it is difficult to distinguish between symptoms and reactions in practice, and owing to this fact, many practitioners make the mistake of treating reactions for symptoms, which have been produced in the patient by former treatments. The physician may think he is treating the patient for a symptom, when in realty he is treating him for a reaction growing out of a former treatment. Under such treatment, the patient steadily grows worse, because more treatment produces more reactions—the so-called "symptoms" do not abate, but increase.

When we begin to normalize structure by adjustment, it is well to remember that we begin also to modify function, and that such change of function, even from the normal, cannot be made without impairing many of the vital phenomena of the organism. We have all treated cases where abrupt adjustment of structures has entirely suppressed function for a time, or on the contrary, excited function to excess. This fluctuation of functional activity may be comprehended more intelligently if you will allow me to quote from Dr. Louisa Burns on the liminal value of the neuron. She says:

> The amount of stimulation necessary to cause the discharge of nerve impulses by any nerve center, is the liminal value of that nerve center. As the irritability of any cell or any center increases, its liminal value decreases. It is evident that the liminal value of any neuron or any center may, under abnormal conditions, be either too high or too low, and that the normal activity of the nervous system as a whole or in any of its parts, depends upon the existence of the normal liminal value of each of its constituent neurones.
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> The liminal value of any neuron or any center may be lowered normally by short periods of rest, by frequent stimulation by the presence of normal nutritive conditions, and the normal elimination of the wastes of metabolism. Normally, the liminal value is raised by long periods of rest, by lack of stimulation.
>
> Under certain abnormal conditions the liminal value may become too high or too low.
>
> Certain poisons, as strychnine, quinine, alcohol, caffine, etc., and the products of the body metabolism in general present in the blood in small amounts, lower the liminal value of the neurons. Slightly increased temperatures, slightly increased blood-pressure, and slight degrees of fatigue, all lower the liminal value of the neurons.
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> Larger amounts of the poisons, greater increase of blood pressure and increased temperature, all raise the liminal value of the neurons to an abnormal extent. Thus is produced the

paralysis of the nerve centers, the inertia of mental activities, and the loss of reflexes associated with the more pronounced degrees of poisoning, or of fevers, or of very high blood pressure.—*Burns*, Vol. II.

It will be noted from the foregoing that the reaction of the nerve-cell is determined by its degree of irritability, and that such irritability may be increased or decreased by a number of different agents such as blood pressure, temperature, toxins, etc.

Our profession recognizes at once the anatomical lesion as a very effective agent in creating many changes in function in the organism which have to do with not only the irritability of the neurons and nerve centers, but also of all cell protoplasm in the organism. The lesion affects the liminal value of all tissue cells in the body, at times increasing and at other times decreasing, the power of the tissue cells to respond to stimuli. It is evident at once that if the anatomical lesion has power to influence function to any great extent, that the adjustment of the lesion is certain to cause great fluctuation in functional activity of organic life of the patient and create what we term reactions from treatment.

By heavy corrective treatment an excess of toxins may be precipitated from the tissues into the general blood stream and cause a rise in the liminal value of the neurons governing excretion of waste from the system, in which case a suppression of elimination of toxins ensues, owing to the reflexes governing this function being partially paralized for the time being by the excess waste. Had the treatment been milder, the amount of toxins thrown into the blood would have been less, and the resulting temporary paralysis avoided.

The normalization of structure should be determined by the rapidity of adjustment of function to such change in structure. If function normalizes rapidly, then adjustment of structure may be accelerated, but in no case should treatments be given close enough together to produce cumulative reactions. Even where cumulative reactions are desired to accelerate function to meet a crisis, it is doubtful whether such treatment is advisable, owing to the fact that such treatment exhausts the mechanism so profoundly.

Where adjustment of structure is produced more rapidly than function normalizes to such adjustment, there are produced cumulative effects from treatment which cause the patient great physical discomfort and mental depression. Patients treated too frequently, or where lesions are broken up too abruptly, show such reactions, and are very hard to retain as patients long enough to produce permanent and satisfactory results for them.

Many patients come to us for treatment who have been ill for years. These patients not only have bad lesions, but they also have latent symptoms which are dormant at the time of beginning treatment; these later become aroused through adjustment of the lesions. Such patients are almost certain to show cumulative reactions from treatment if adjustment of the lesion is made rapidly.

Then there are patients, who have very ustable nervous systems who show intense reactions to even light treatments. In many patients of this type it is difficult to give treatments of any kind that do not produce some cumulative reactions. When extensive lesions are broken up in such patients, there is produced in the nervous system what we may term a "nerve storm," and for days or even weeks it is not possible to do much in the way of adjusting structure. Palliative treatments must be resorted to for some time, until function is partially normalized.

There is one peculiarity of reactions from adjustment that should be noted at this point, which is, that these reactions vary greatly in the time of manifestation in patients following treatment. Some patients feel better the following day

after treatment, while on the second and succeeding two or three days they feel decidedly worse, and complain of sensations which simulate LaGrippe very closely; other patients do not show any reactions for possibly a week, then the aching soreness and general malaise is noticed; still other patients never show any bad reaction from treatment. Now it is such fluctuations in function of the patient as these, that make it difficult for the physician to determine the frequency and potency of treatments to give, in order to produce the best possible results. So far as the writer is aware, the only satisfactory method of determining this question is to study closely the reactions from each treatment in each patient treated. If the reactions from treatment become too severe, then decrease the frequency of treatment, and also the amount of adjustment given each time, until functions begin to normalize, and reactions subside.

We have said that the normalization of structure should be determined by the rapidity of adjustment of function to such change in structure, and that as function normalizes rapidly, then adjustment of structure may be accelerated. Now it is certain that most of you here have recognized this fact long ago, and have sought to accelerate structural adjustment in some of your patients, much faster than you could accomplish that desire. The patients who have worked in mines, on farms or in the streets, often possess lesions that are quite formidable. The liminal value of the nerve cells of these patients is quite high, and we need not be apprehensive of very severe reactions from treatment here, *unless we have a good technique.* Let me say that in such cases as these, here is where a good technique counts. If you have a technique that will correct lesions in the laboring classes of men, it is just as possible to create reactions in them as in the hot-house patient with unstable nervous system.

It is possible with a good technique to adjust structural lesions much faster than function will normalize. But such results are only possible where a good technique is used. The physician who fails to grasp the idea of structural adjustment of anatomy, in distinction to that of manipulation of the body, need never be worried about reactions from treatment. He will never change structure faster than function will normalize. The gentle manipulator is harmless—and also impotent. Not so the practitioner who employs a technique with power to produce adjustment of the anatomical lesion, whether great or small. Here we are dealing with mechanics which furnish power enough to shift structural parts of anatomy from one position to that of another, to break down adhesions, and to temporary relax muscles that have been chronically contracted over long periods of time. Such power is sufficient to separate temporarily articular surfaces of joint structures and thereby establish mobility where it has long been absent; to even create temporary congestion, and mild inflammatory reactions in tissues that are almost mummified by loss of vitality. Such technique is necessary if we are to adjust structure in a way to produce permanent results, and prevent the criticism of osteopathy made by some of our former patients, who say that "osteopathic treatment gives temporary relief but that it does not cure disease."

It may be said that such technique is dangerous. And so it is—in the hands of some physicians. So is the surgeon's knife in the hands of the unskilful. We should develop our technique from the standpoint of efficiency in both the operator and the operated. We need more technique, and better technique, and most of all, we need to know how to use that which we already possess.

Traction Bldg.

DISCUSSION

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Dr. Smith has presented two vital principles which are distinctly osteopathic in their conception of disease. In discussing structure's effect on function, he has shown that osteopathic pathology is a further development of the histological pathology of the old school teaching, also that structural lesions produce disturbance in function and correction of such lesions may cause varying reactions.

He did not leave you there with beautiful theories, but endeavored to present methods for normalizing function. While other agencies should receive their due consideration, osteopathic technique is of the greatest importance to us, not only because it is the distinctive osteopathic work of our practicians which is giving our professional individulaity and the world a new science, but because an intelligent careful technique secures results which a slothful technique fails to accomplish.

To hold strictly to osteopathic principles is a safe-guard against becoming careless in our methods of treatment. To constantly have in mind a structural picture of the body in health and disease is to develop and build up our technique. To lay too much stress on symptoms; to treat, for example, the mid-dorsal merely to reach the nerve distribution to the stomach because it is manifesting discomfort, is a suicidal way to practice osteopathy and means our ultimate undoing as successful osteopathic physicians, or makes us fit subjects for a step backward, grasping medical ideas in our dilemma. Can anyone in the practice of osteopathy doubt, that if we once learn how to use our technique to produce definite and specific reactions, we will have no trouble in eliminating symptoms insofar as the cases are amenable to treatment? It is common to hear the older practitioners declare that the longer they are in practice the lighter treatment they give. This is doubtless significant in that they recognize the reactions resulting from treatment and in the hard school of experience they have learned the value of estimating the relationship between technique and effects. The ever-present idea of the osteopathic physician should be to normalize function. With a constant picture of structure and its relation to function holding an impregnable position in his mind, he can hope to intelligently direct technique and make a helpful study of reactions produced by such treatment. It is doubtless in these observations of reactions that we approach function the closest, and if we understand the effects of our treatment we certainly become more intelligent in its administration and at the same time more nearly approach the production of specific results.

Dr. Smith has called attention to a frequent over-sight by osteopathic physicians, where he states that in normalizing structure we not only modify function, but we observe that the change of function even from the abnormal cannot be made without physiological disturbances, and that in these physiological disturbances function is either suppressed or over excited for the time being. In view of the fact that we often find heavy corrective treatment productive of depressed or toxic reactions, it is only reasonable for us to normalize structure according to the manifested changes of function, and further we must realize that disturbed function resulting from vigorous anatomical adjustment accomplishes its equilibrium in rest and not in additional or more frequent treatment. Here is where we have room for the greatest play of judgment an osteopathic physician possesses. He who can adjust structure at the same rate that function normalizes has learned the value of noting the reactions. In the Old Doctor's "Find it, fix it and let

In the absence of Dr. Moore the paper was presented by J. A. Van Brakle, D. O., Oregon City.

it alone," rest is declared as important as skill in adjustment. However, if we could possess as remarkable a knowledge of the body as Dr. Still and develop a really good technique, reactions from treatment would not be as perplexing as we frequently find them.

Many of us have had the experience of having patients cease treatment after a few visits to the office because of unpleasant reactions. Better judgment on our part, which means a greater knowledge of structure and function, as well as observation of the effect of technique will avoid most of these disappointments. Permit me to cite an instance or two:

Two months ago a wealthy young man came to me suffering from a sacro-iliac strain, which troubled him frequently while playing golf. He urged the necessity of immediate relief on account of an important game he wished to play. Although the patient complained of treatment being painful, I endeavored to adjust the innominate at the first treatment. I also bandaged him with adhesive tape and made an appointment for the next day. For two months I did not see the patient although he suffered constant inconvenience. Word reached me through a friend that the patient thought I treated him too severely and made the condition worse. Finally he surprised me by returning and again placing himself under my care. I secured raidographs of the joint and told him I could only correct the difficulty gradually and it would probably take several months. He is now under treatment with prospects of an excellent result. This experience is one most osteopaths have had and is unfortunate for our work, as frequently an influential patient is thus lost to the cause of osteopathy.

Another case: A corpulent lady called for treatment, but in consultation I found she had been under osteopathic treatment and was dissatisfied, complaining of unpleasant reactions. I refused to treat her and secured her promise to return to her doctor. She suffered from pain in the knees and various other difficulties. I judged her excessive flesh and abdominal ptosis to be factors in her discomfort. Owing to her persistence in asking me to suggest something she might do to help herself, I told her to take the genu-pectoral position each night before retiring. Some weeks later she called again and said she did not return to her doctor, but used by suggestion regarding the genu-pectoral position and found it relieved her promptly. She again asked me to take the case, so I phoned to her former doctor and explained the situation. I am careful to see she suffers no unpleasant reactions.

These two cases serve to demonstrate the importance of osteopathic physicians always keeping in mind the mechanical picture of perverse structural relationship interfering with function and further, and of equal importance, the exercise of judgment in the use of technique with due consideration regarding consequent reactions.

SELLING BLDG.

GRAPHIC TECHNIQUE

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Chicago

Believing that oft-times a picture will fix the points more clearly in one's mind than mere word description, we are offering the following figures, outlines in a rough way, of a few of the elementary problems of technique. These represent cases that we meet with every day in the treating room.

We are not of the opinion that every treatment can be prescribed on a mathematical basis, but we are firmly of the belief that the more closely and precisely we maintain the mechanic viewpoint, the more specific as well as comprehensive will our technique be. We as practicians are well aware, no matter how complex a symptom picture may be or intricately confounded pathologic processes may seem, that there is cause and effect—primary, secondary, compensatory, adaptation and reflex—underlying the condition of the body termed ill-health. Too much of our treatment is apt to savor of isolated or detached methods, at the expense of fundamental work, instead of first diagnosing the possible relationship of the several lesions that may be presented and to be followed by what may be called a correlated technique.

No doubt there is always a first cause, whether it be mechanic or metabolic, organic or functional, or what not, and

our first work is to diagnose if possible what really was the inception of the pathology. By so doing much time can be saved, a more definite technique executed, and, what is more to the point, a greater percentage of cures is a certain result.

The bodily mechanism in its stress and strife to maintain an equilibrium following an osteopathic lesion, for example, probably at the moment succeeding the damage, or very shortly after, initiates the secondary and compensatory lesions. Thus practically and fundamentally many (not all) of the secondary and distant compensatory changes occur synchronously with the primary disturbance. This is clearly shown in the adjustment of the primary lesion by immediate return to the normal, if the pathology permits, of secondary and compensatory lesions. Consequently dependent pathologic changes, that is of secondary and compensatory lesions, must progress, after being established, *pari passu* with that of the primary lesion. It is of some of these basic laws as exemplified by spinal mechanics that we purpose to depict in the following figures.

In this preliminary sketch we are attempting to present a probable new interpretation, to a certain extent, of some of the basic laws of osteopathic lesions. Everyone will admit that owing to the exceedingly complex and complicated anatomy, physiology and pathology of spinal lesions there is a vast field that is unformulated. In the September and October* JOURNAL we touched upon a few of the complicated problems.

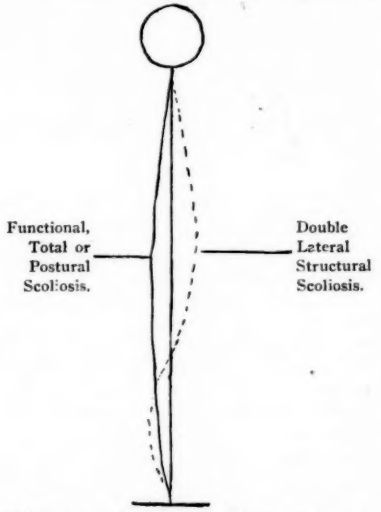
Two features of the spinal mechanism are uppermost: First, although upon general lines the spinal colum in its movements as a whole follows the laws pertaining to a curved rod that engages two planes not parallel, at the same time, which accounts for the compound movement of side bending rotation, still the spinal column is considerably more than a homogeneous column. There are the movements of individual joints, the variation in size and shape of the vertebrae, both as a segment and part of a segment, the varied formation of the discs, the variation in musclar, ligamentous and connective tissue tension, the various contributing and exciting causative factors, etc., that add vast complex factors.

Secondly, we are convinced from clinical evidence that much confusion in lesion interpretation and technique arises from not fully comprehending and appreciating the distinct differences between physiologic or functional curvatures (frequently initiated by the osteopathic lesion), transitional curvatures and structural curvatures. Too often we attempt to interpret the lesion through the medium of structural or scoliotic curvature conditions or pathology. In the following we will endeavor to depict a few of the elementary features of this viewpoint. We repeat, that clinical experience convinces us that certain lesions are exaggerated physiologic conditions and do not follow the laws of scoliotic formation. This probably accounts for some of the confusion in technique presentation. We are aware that a number of orthopedists contend that the body of a vertebra never rotates to the concavity of a curvature, but we are convinced that the contrary is true in certain osteopathic lesions, functional curvatures, and as part of the picture in the transitional stage from functional curvatures to structural curvatures. An interesting discussion will be found in Tubby's Orthopedic Work, Vol. I.

The spinal column physiology includes a wide range of possible movements and combinations as pertain to position of the body and region of the spine. Abbott claims his method is a reversal of physiologic movements under certain condi-

*A reference of unusual practical value was omitted in the October JOURNAL: "Chronic Focal Infection as a Causative Factor in Chronic Arthritis," Billings; *A. M. A. Journal*, September 13, 1913. This article is of exceeding value.

tions—flexion, plus lateral bending, plus rotation of bodies toward convexity—which is true. But it is of the wide field of osteopathic lesions we wish to consider—lesser in structural changes, but not in pathology. A list or deviation of a vertebra from trauma or other cause, immediately irritates the erector muscles and a spasm results to help maintain balance if not symmetry. The list may include much side bending and little rotation and *vice versa*. But it is the "kinked" and "fixed" joint that inaugurates trouble; and the efforts of the organism to maintain balance under these



conditions constitute an important part of the study of osteopathic mechanics.

FIGURE 1. The curved line on the left represents a functional scoliosis. A functional curve may embrace only a portion of the spinal column. A single curve to the left will be found in over one-half of all curves. Osteopathically, a functional curve is frequently noted embracing the whole or part of the dorsal region, or it may be in the lumbar or cervical region. Curves occur with the convexity to the right, but not so often as to the left. Posture, disturbance of muscular balance and osteopathic lesions are among the common causes. Figure 1 should be studied in conjunction with the other figures.

The important osteopathic point that we wish to emphasize here is that functional curves may develop into structural curves. In this instance the left functional curve may develop or pass into the double lateral structural one. We should keep in mind the rotation features of the vertebral bodies under physiologic, incipient and transitional curves and lateral scoliosis. This should not be interpreted that all of them do, or conversely that all structural curves are first functional curves.

We believe there is a distinct difference between functional, transitional and structural curvatures. The first is largely induced by osteopathic lesions, compensatory measures, postural defects, and unbalance of muscles. When too pronounced, when it does not balance the forces of equilibrium (at best the spinal column is in a state of unstable equilibrium and there must be a margin of nutritive and nervous forces to maintain integrity of bony tissue and sufficient muscular and ligamentous tone), it may pass through a transitional stage to a typical structural curve. For example, here, the shoulder girdle constantly attempts by way of equilibration to square with the pelvic girdle. And when the progressive limits of a functional curve has been reached, when the side bending excursion has found its physiologic limits, and the forces are still agressive, a structural curve development, a torsion, is the usual result.

There is a definite range, or play, of mobility and flexibility of a joint permitted by the muscles and ligaments. When movement passes beyond these confines, the physiologic, the condition becomes pathologic. Right here on the borderland of exaggerated and anchored physiologic conditions and beginning structural or scoliotic changes is a field that includes many of the osteopathic lesions.

A curvature starting as functional, superinduced by an osteopathic lesion, for example, in passing through the transitional stage to a structural curve has features in the transitional stage characteristic of both the functional and structural. In passing it may be well to emphasize again all structural curves are not inaugurated in this manner, or conversely all osteopathic lesion and consequent functional curves do not progress to a rotary or structural curvature.

In a left functional curve of the dorsal, for example, the left shoulder is higher, the left blade elevated and forward, the right blade downward and backward, and when the patient bends forward with torso parallel with the floor, the concavity of the curve is higher than the convexity. In a structural curve the convexity would be higher owing to the rotation of the vertebrae toward the convexity. Special care has to be taken in the diagnosis of the transitional stage.

Osteopathic lesions invariably induce incipient curves, which at the beginning are usually functional. Potentially there is likelihood of the curve becoming structural, but by all means not necessarily so.

Strictly speaking, in functional or postural curves there is a certain amount of rotation and side bending, in varying degree proportionately, but the changes are practically confined within moderate physiologic limits. This is inclusive of almost an infinite number of possible osteopathic lesions. Then the change from functional to structural curves also comprises a wide field of lesion conditions—the transitional stage, and a thorough diagnosis may be difficult. Consequently we should keep in mind: (1) The simple osteopathic lesions wherein side bending and rotation are part of an exaggerated physiologic movement with anchorage by the involved ligaments, muscles and connective tissue; (2) the lesions that present features of both functional and structural curvature changes, the so-called transitional stage; (3) the lesion characterized by structural curvature changes which in some of its features may be diametrically opposite to those of the functional, for examples, the lumbar and structural curves respectively wherein there is a reversal in the direction of the rotation of the vertebral bodies, and likewise the left total functional curve and the right dorsal left lumbar structural curves respectively. The field of spinal lesions is a most extensive one.

The many factors with innumerable possible combinations is what makes diagnosis so difficult. A truly successful technique must be a realization or expression from within one, not an imitation, based upon a thorough appreciation of the mechanistic conception, and its corollaries, of the bodily mechanism.

Lovett gives the following as the mechanism of transitional curves:

> If total scoliosis tends to increase, it must do so by an increase of the existing side bend and of the existing twist, since both are correlated, not necessarily of both in exact proportion, but to some extent both factors must share it. The shoulder-girdle will, therefore, be more twisted as the lateral curve increases. * * * An *adjustment** apparently takes place when the tendency of the total curve to increase passes beyond a certain point. For the explanation of this, one naturally looks to the instinctive tendency to equilibrium and balance spoken of as an intrinsic property of the upright living spine. There must be going on at all times this effort to square the shoulder-girdle with the pelvis and to keep the head and upper spine as nearly as possible in the median line of the body. This adjustment will naturally occur where the spine offers the least resistance to it, and as individual vertebral columns vary, the compensatory adjustment will take various forms. (Every osteopath is familiar with many forms of so-called compensatory changes.—EDITOR.)
>
> Assume that a child stands and sits with a left total curve. He will, after a certain point in the deformity is reached, be continually striving instinctively and unconsciously to twist the upper part of his spine and his shoulder-girdle forward on the right and to bend the upper part of his spine convex to the right to restore his balance. We have seen that the dorsal spine twists more easily than it bends to the side. He is, therefore, more likely to twist his dorsal spine than to bend it to the

side. He will, for this reason, twist the upper dorsal spine to the left, which twist, as we have seen, necessarily carries with it a dorsal lateral curve convex to the right. * * *

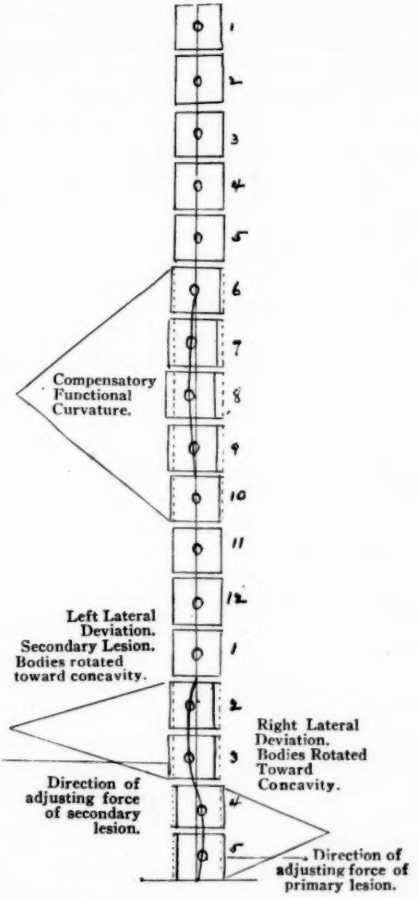
The disappearance of *concave-sided** torsion which has once existed in any part of the spine. may indicate that the compensatory change has already begun and that the so-called total scoliosis has begun on its transition to a compound curve.

We believe this explains an important part of the basic mechanical pathology of a number of osteopathic lesion conditions and resulting changes. Our clinical findings and experience support it. At any rate we frequently note lesions where the listing and rotation has swung the body toward the concavity. Posture, muscular unbalance and lesions that have become anchored through ligamentous change establish many functional curves and osteopathic lesions. Then the influence of weight bearing upon the bodies of the vertebrae, molding of the bones, etc., will force and establish the characteristics of true scoliosis. Naturally the technique of one type will be distinctly different from that of the others.

In our opinion the variety of mechanical changes induced incident to and concomitant with the transitional stage accounts, at least in part, for a number of the osteopathically coined descriptions of lesions such "approximations," "side-tippings," "separations," etc.

Most osteopathic lesions act asymmetrically, there is a "kink" that must be adjusted by side bending rotation precedure. If the lesions act symmetrically there will be either a kyphotic or lordotic change. The tips of the spine are not a reliable guide; the position of the body and transverse processes should be located. The body may rotate two or three times as far as the spinous process, and besides the process may be deflected. Care must be taken not to confuse the many osteopathic lesions with true scoliotic conditions. All lesions are not compensated, which is another point that may confuse one.

FIGURE 2. This represents a common condition of the spine resulting from an osteopathic lesion. The dorsal and lumbar vertebrae are outlined. The primary lesion is between the fifth lumbar and the sacrum. It is commonly termed a rotation of the fifth lumbar to the right. This means that we simply and readily note that the spinous process is rotated to the right. The body of the vertebra, which is not so readily noted, is carried to the left—according to the physiologic movements



*Italics ours. In our opinion, the lack of adjustment or of thorough compensation is a significant feature of an osteopathic lesion due to an exaggerated and anchored physiologic condition. See further on.

of the lumbar spine the body in side-bending rotation turns toward the concavity of the curvature.

Viewing the primary lesion in this case as a rotation between the lumbo-sacral juncture one readily appreciates that fundamentally and technically it really constitutes a rotation of the upper body, including the fifth lumbar vertebra to the crown of the head, upon the lower body, including the sacrum, to the soles of the feet. Instinctively and immediately after the lesion is produced and one is in an upright position, the upper body will swing toward the median line and its concentration of weight will be represented by the gravity line. Now if the lesion is not adjusted by the assumption of the upright position, a secondary or compensatory lesion (or more than one) will immediately occur in the superstructure to compensate for the primary lesion and the consequent shifting of the line of gravity. But we may add the superstructure does not always entirely compensate; this may partly take place in the tissues underneath, for an illustration we refer to the next figure.

Referring to Figure 2 again, it will be noted that the fourth lumbar has been carried in the same direction as the fifth. This frequently occurs but not always. Usually it is not displaced as much as the fifth. In some instances the third and second and first and also the twelfth dorsal, which functions the same as a lumbar vertebra, will be carried in the same direction (see Figure 4). More often there is a secondary and compensatory lesion between the third and fourth, (another common place is at the dorso-lumbar junction). The rotation, it will be noted, is in the opposite direction, for the law of the lumbar region is expressed by the rotation of the body of the vertebra toward the concavity of the curve. So in reality we have presented a double lateral curvature of the lumbar region. If the primary lesion is not a serious one, the secondary lumbar lesion may be so slight as nearly to escape observation.

From the fifth to eleventh dorsal we have represented a left lateral functional curve. Some such functional curve is a very frequent accompaniment. It is undoubtedly compensatory, showing that the secondary and compensatory second and third lumbars have not sufficiently compensated. This is proven by the fact that just as soon as the primary lesion is removed, the functional curvature rights itself. Then, moreover, it is not an uncommon occurrence to also have the left innominate tilted backward, shortening the leg as a compensating lesion. That it is an apparent or compensatory lesion instead of a primary one is proven by the fact that just as soon as the primary fifth lumbar rotation is adjusted, the physiologic pelvic inclination subsides (see also Figures 3 and 4). Of course this is not saying that primary innominate lesions do not exist or that a fifth lumbar rotation may not be compensatory to the pelvic lesion. There may be infinite combinations and gradations here, but the underlying principles, as shown above, illustrate the mechanics. The primary lesion may be rotated in the opposite direction or it may be higher up, etc., but the bodies of the lumbar vertebrae, and including the twelfth dorsal, rotate toward the concavity of the curvature; this means the spinous process is in the opposite direction, and where there is pelvic compensatory lesions, as there is apt to be, the apparent posterior innominate, the shorter leg* side, is on the side of the lumbar concavity. But this must not be construed or intepreted in accordance with the laws of structural

*Not necessarily though, for there may be crossed asymmetry. In some instances a physiologic or compensatory tilting of the pelvis will establish a strain that leads to a small or less definite innominate lesion, and which requires special adjustment (this is also true with spinal lesions). Then there is the important field of primary innominate lesions, which we are not considering. No doubt why some innominate adjustments do not remain corrected is simply because they are secondary features.

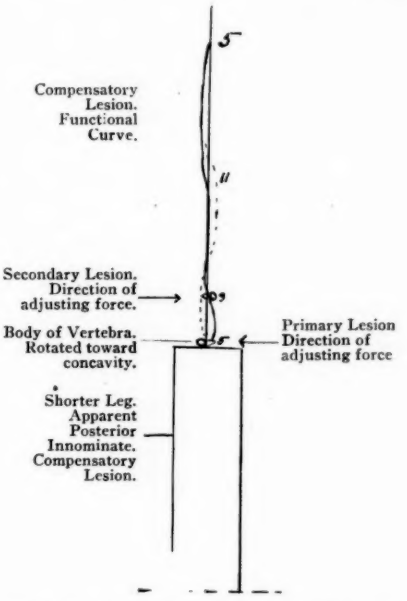
scoliosis. This (structural) may be existent, or in the making here, which reverses the pathologic picture.

One other point before we describe the technique. The lateral functional curvature in the dorsal (remember if the primary lesion is reversed, this will be reversed) is usually flexible at all points, clearing showing that it is compensatory. The slight displacement is sidewise; no rotation, and evidently permitted by the normal play of the capsular and common ligaments.

We will mention one technique method only, owing to time, but your favorite method no doubt is applicable. The special point, however, is the diagnosis; then technique application is easy. Two very practical points for guidance are: The spinous process is toward the convexity, and frequently the shorter leg is on the side of the concavity. Place the patient on the side of the concavity (operator in front of patient), hips well back and upper thigh tilted forward in easy relaxation; then bring the upper body well forward with sharp angle at lumbo-sacral juncture. This means that the convexity is uppermost (remember the body of the vertebra has rotated toward the concavity), that the leverages are accessible, and all that is necessary, if angles and leverages and relaxation are right, is to rotate the torso, including fifth lumbar up backward upon the pelvis, or better, pelvis forward, toward operator, upon the spine. If conditions are right, the other vertebrae are automatically locked against possible injury and the body of the primary lesion rotates into apposition. Reversing the sides of the body, the same procedure may be applied to the secondary lesion. Where the lesion is above the fifth, a fixed point must be made by the lower hand of the lower surface of the lesioned joint. It can be seen that this method follows a reversal of the outgoing path in accordance with the physiologic movements. And if rightly and carefully performed, there will be no jamming of joint surfaces.

Referring again to the pathology: The above is only one of several possible combinations; there are cases, especially of long standing, that present true scoliotic rotation, bodies turned toward convexity, that you can apply the above technique, with a certain amount of molding of curves, successfully; and probably there is also a feature often overlooked, viz., variation in physiologic extent and range, proportionately, of side bending and rotation—this would present different clinical pictures.

FIGURE 3. This represents a lesioned condition and resultant mechanical situation similar to Figure 2. In addition we have portrayed a compensatory innominate lesion, posterior left innominate. An elementary study of Figures 2 and 3, we believe, will make clear and simple the basic principles of most lumbar lesions. Of course a reversed lumbar lesion will reverse the above mechanics. (The dotted lines represent another common picture—5-L body would be reversed.) And there may be almost infinite combinations and gradations rep-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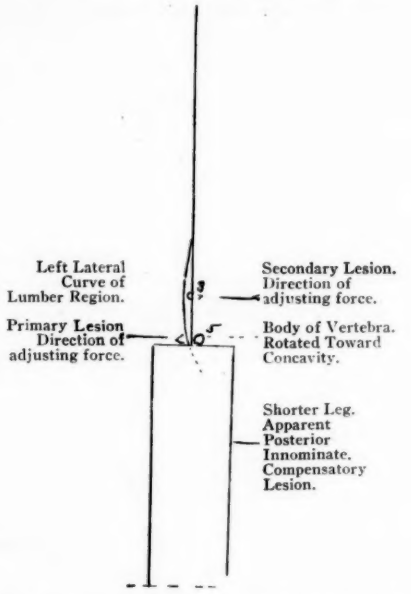
Compensatory Lesion. Functional Curve.
Secondary Lesion. Direction of adjusting force.
Body of Vertebra. Rotated toward concavity.
Primary Lesion Direction of adjusting force
Shorter Leg. Apparent Posterior Innominate. Compensatory Lesion.

resenting these principles. But the elements of one comprise the elements of many others. We are not claiming an exhaustive survey, but simply depicting a few of the first principles.

The technique here would be the same as in Figure 2. No matter what the technique method is, so long as it adjusts with a minimum of friction upon the part of both patient and technician. In all instances there must be return by way of the out-going path. Keeping the joint-planes as nearly parallel as possible will lessen any consequent shock. Some sort of leverages is necessary in order to accomplish the adjustment. Exaggeration of the lesion will release the abnormal position which comprises a first measure in certain procedures. But the exaggeration must be maintained until the moment succeeding the return negotiation or all the advantage will go for naught. If the method to be pursued is one dependent upon a certain position of the parts, certain leverages, to be followed by a quick movement or possibly a thrust one cannot be too sure of his diagnosis and pathology. Frequently rapidity of motion will the more readily break up adhesions and loosen contractures and fibrous tissues. However, all of this premises a definite mechanistic viewpoint of the existing lesioned conditions.

FIGURE 4. This represents another common phase of osteopathic pathology of the lumbar region. The primary lesion is at the fifth lumbar, but reversed as to that in Figures 2 and 3. As a consequence, the entire lumbar spine has swerved to the left, although there is a partial secondary and compensatory lesion (lines not shown in cut), between the third and fourth lumbars. (The structural type will exhibit the vertebral body toward the convexity.) This does not fully compensate, so not infrequently we find an apparent posterior innominate upon the right side.

Correction of the fifth lumbar will probably be followed by release and spontaneous adjustment of the other lesions. However, it is a good plan to see that they are adjusted before concluding the single treatment. We have occasionally experienced that in instances where adjustment of the primary lesion was difficult, that first correcting the secondary lesion, say in this case the third and fourth lumbar articulation, would materially aid in adjusting the primary lesion, or here the fifth lumbar. Similar compensatory lesions are commonly easy to adjust, for the irritation as a rule is not severe, but

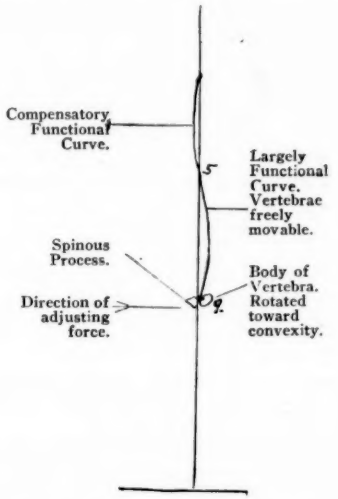

Left Lateral Curve of Lumber Region.
Secondary Lesion. Direction of adjusting force.
Primary Lesion Direction of adjusting force.
Body of Vertebra. Rotated Toward Concavity.
Shorter Leg. Apparent Posterior Innominate. Compensatory Lesion.

they do not stay adjusted unless the primary lesion is corrected. All have experienced how difficult it is to replace and align some of the primary lesions. Muscular contractions, congestion, inflammation, contractures, fibrous changes, plastic exudates, all, enter at times as pathologic features, to say nothing of more serious changes.

In these cuts it should be recalled we are illustrating exaggerated physiologic conditions. Should the condition pass through a transitional stage to a so-termed "rotary," "structural" or "scolio-

tic" curvature, its concave and convex characteristics, in certain instances, as exemplified by vertebral rotation and side bending and spinal torsion through weight bearing escape, induced by gravity, or the line of least resistance, will be reversed. The etiology of structural curvatures is a most interesting and complex study; but it is not our purpose here to enter into a discussion of the many contributing factors. Many of the osteopathic lesions, however, do not enter into a true scoliotic condition. An interesting paper, although of no special value to the osteopath, will be found, May number of *American Journal of Orthopedic Surgery*, on "Sciatic Scoliosis."

FIGURE 5. The primary lesion is between the ninth and tenth dorsals. The alignment from and including the tenth dorsal down is intact. The body of the ninth is rotated toward the convexity of the curvature. This lesion will carry the eighth with it to a certain extent, but oftentimes the displacement is not much more than extreme limits of the ligamentous play. From the eighth to the fifth there is a lateral functional curvature. This is a common osteopathic condition. The functionally displaced vertebrae are not abnormally rigid, at least not any more than a muscular unbalance would induce. Above this we note a compensatory curvature. The combinations of secondary and compensatory lesions may be numerous.


Compensatory Functional Curve.
Largely Functional Curve. Vertebrae freely movable.
Spinous Process.
Body of Vertebra. Rotated toward convexity.
Direction of adjusting force.

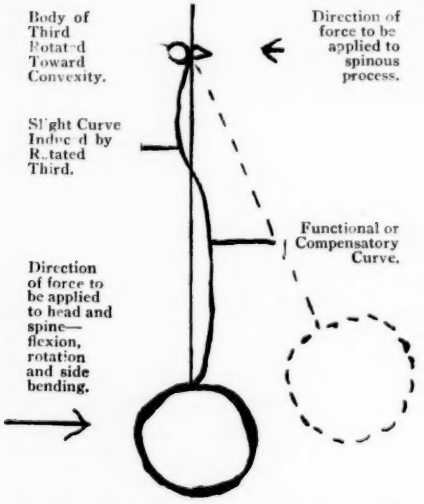
Treatment to the curvatures *per se* will amount to but little. But just as soon as the primary ninth is corrected, the rest will spontaneously align. No doubt a little molding or plastic work and exercise will help, especially if it is a long standing case and the muscles and ligaments have more or less conformed to the malalignment. The real work to perform is, of course, specific adjustment of the ninth. In these figures we have outlined the direction of the adjusting force as pertains to the spinous process. In the dorsal region it is the reverse to that of the lumbar, so far as the rotation of the body of the vertebra is concerned, that is, in the one toward the convexity, in the other toward the concavity. In a curve of this kind, the "key" may be at the point of greatest convexity. If double lateral curves progress to structural characteristics, there may be at the point of crossing one or more of apparently prominent vertebrae, owing to lessened rotation.

One of the easiest methods of adjustment here is to have the patient seated as we have repeatedly explained in the technique department. Hyperextend the spine; place the thenar eminence against the right transverse process of the ninth; then when position and leverages and balance are just right, exert a thrust against the process. Some may prefer to use the thrust while the patient is faced downward upon the table; others with a rotary technique, with the patient upon his side, etc.

FIGURE 6. A rotated upper dorsal is a common lesion, as well as being oftimes a difficult one to adjust. Various practicians will have their favorite method; many utilize a thrust here. We are describing the following measure be-

cause it clearly exhibits the physiologic movements of the dorsal region..

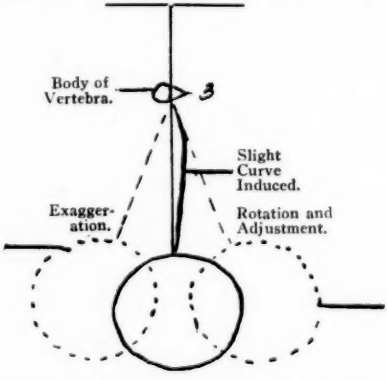
Stand directly back of the patient with the left hand thumb against the left side of the third spinous process, which is deflected or rather rotated to the left. The body of the vertebra is rotated of course to the right, the convexity of the curve. Place the right hand over the crown of the head with arm and elbow dropping down against side of neck and shoulder. Next flex the head and upper spine,


Body of Third Rotated Toward Convexity.
Direction of force to be applied to spinous process.
Slight Curve Induced by Rotated Third.
Functional or Compensatory Curve.
Direction of force to be applied to head and spine—flexion, rotation and side bending.

bringing fulcrum to bear upon the third dorsal; this gives one his range and application of levers and also loosens the contractions a little. Now, remembering we have a vertebra with side bending and consequent rotation of the body of the vertebra to the convexity, and carrying one or more of the vertebrae with it, a slight rotation of the head, including all of the upper vertebrae, will be the next step; this tends to reverse the direction of the rotated vertebrae by way of tension upon muscles and ligaments. With the patient thoroughly relaxed and the range of levers precisely measured and under complete control, exert a fairly sharp side bending with the hand and arm controlling the upper spine, against the adjusting thumb. Most of the work is done by the upper hand. It is needless to add that the power arm and fulcrum must be correctly guaged and placed or else the execution will be a failure. It is a little reversed rotation that really does the work, for if we attempt flexion and then side bending we simply exaggerate the lesion and nothing else. But here under these conditions rotation plus side bending reverses to the normal apposition.

FIGURE 7. Physiologically, in the cervical region, side bending is accompanied by rotation of the vertebral bodies to the concavity of the lateral curve, the same as in the lumbar, but the reverse of the dorsal. No doubt many osseous lesions are the result of side bending, not only from trauma, but particularly from unbalance of muscles superinduced by cold and wet infection, over-work, over-fatigue, poor nutrition, etc. This side bending followed by rotation should not be confused with rotation followed by side bending. (See physiologic movements near end of article.)

In this figure the patient is lying upon his back so the vertebral bodies are up-



permost. The body of the third is to the left, toward the concavity. In this condition very frequently, and it is a very common lesion, all of the upper three vertebrae are slightly carried in the same direction.

A usually easy method to adjust this lesion, while the patient is upon his back and the operator at the head, is, first,

exaggerate by further side bending, slight left rotation of the face helps, (position "A" in figure). The angle must be placed just over the lower third or else considerable of the force of the leverage advantage is dissipated. Maintain the relaxation and release thus obtained by traction on the upper spine; and at the same time carry the head over into position "B" in figure with rotation of the face, which includes head, first, second and third cervicals, toward the right. This apposes the lesioned joint. Frequently a quick light, thrust when the head is rotated will be necessary to overcome contractions and other soft tissue changes. When this method is carried out specifically and fibrous changes are not marked it is usually successful. This can be utilized for most of the cervical vertebrae. One hand controls and guides the head and face and the other localizes the angle of the leverage and maintains fixation of the vertebrae below the lesion. In a number of these cases there will be a secondary lesion a vertebra or two above in the opposite direction; a reversal of the technique will correct.

There are several methods of cervical adjustment, but as we have said, our purpose here is simply to illustrate some of the fundamentals.

The preceding examples are common lesions. We meet with them in our every day practice. No attempt has been made to cover the spinal field. They simply portray a few that bring out fundamental principles. We have not outlined primary and complicating lesions of the pelvis which comprise a large and important field. In physiologic changes the sacrum and coccyx follow the laws pertaining to the spine. Then another common source of mechanical lesions is the spinal column that has not developed normal physiologic curves, wherein enteroptosis, tilted pelvis, oblique ribs, round shoulders, etc., are part of the configuration picture, and wherein the forced muscles of expiration and the central tendon (with its extensive ramifications) of the diaphragm, through functional and pathologic changes, are important contributing factors. It is easily seen all of this constitutes forces to be reckoned with.

Following this we append a few sentences bearing upon side bending and rotation selected from Lovett's work.* This will supplement to a certain extent the physiologic movements published in the September JOURNAL. It requires considerable study to get the physiology fixed in one's mind. The architecture of the spine is very complicated; and besides all of the physiology has not been thoroughly formulated. We should keep the point constantly before us that these movements pertain to the typical spine. There will be considerable and varied difference in pathologic conditions. There is a wide field that pertains to simple osteopathic lesions *per se*. Although the spine as a whole, in flexion, extension and hyperextension, presents a variety of characteristic movements, still we should also be familiar with the various features of the different regions. Then in addition to this every joint is to a certain extent a law unto itself; and this means a great deal to the osteopathic technician. In all of the innumerable features and phases we should not lose sight of the fact that the primal, practical consideration (which we have pointed out elsewhere, in osteopathic lesions, means irritation), hinges on its weight-bearing factor.

The almost infiinite combinations of the compound movement of side bending-rotation are intricate enough when we consider the frame work alone, but when we add to this a never duplicated pathology, small wonder the technician's skill is constantly taxed. We should recall side-bending or rotation does not occur in a

*Smith's book on "Lateral Curvature of the Spine and Flat Foot," will also be found helpful.

pure form; it is always a compound movement.

There are two more essential points of the utmost practicalness: First, the vast difference between a simple osteopathic lesion and a lesion or rotated vertebra that is part of a structural curve. There is as much difference between these as there is between a functional or so-called postural curve and a structural curve or scoliosis. A simple or functional lesion may pass through a transitional stage to a structural lesion which is part of a greater or less structural curve, in fact, may be the starting point, the same as a functional curve as we have seen may pass through a transitional stage to a scoliosis, for example, a total left lateral functional curve passing into a right dorsal and left lumbar scoliosis.

Rotate the fifth lumbar, for example, and its body turns to the concavity of the curve (still it may be of structural type from start); this comes under the law of the physiologic movements of the lumbar area. But in a structural lumbar curve the body will be found rotated to the convexity. So in passing from a functional lesion to a structural one, owing to the influence of the weight bearing upon the body of the vertebra, it is forced from the concavity to the convexity of the curve. Technically, in one sense, the simple lesion obeying the laws of physiologic movements of the spine is structural rotary, but not in the sense we imply to a structural curve, rotary, torsion, etc. When a vertebra has rotated to a point just beyond the confines of physiologic excursion, the immediate effect upon contiguous tissues through the weight bearing factor is more compromising to all the segmental tissues of its neighborhood than after thorough compensation; as for example, structural changes have taken place. Oftentimes structural compensatory changes do not take place; and this is the probable reason why an osteopathic lesion is usually far more disturbing to the integrity of the tissues than some definite structural curvature. We believe this point is worthy of serious consideration; and which probably accounts for a decided irritated condition, as well as oft-times the changing compensatory picture, the undue instability and flux.

The second point we wished to mention is the several methods of adjusting a lesion. This is of but little consequence so long as the lesion is adjusted and the manner of adjusting is not harsh. (1) Reversal of the physiologic movements in the simple lesions if done skilfully is always a satisfactory method, providing the pathology permits. An understanding of the physiologic movements and carefully placing of leverages and angles is all that is necessary. (2) The exaggerate-the-lesion principle is very useful and can be utilized where the former will not always get results, namely, in cases where the lesion is very firmly wedged or adhesions are present. A thorough knowledge of the physiologic movements is not necessary, but very helpful. Simply determining the nature of the lesion and then applying the indicated mechanical principles will suffice. We have spoken of the details of this method so many times we will not repeat. (3) By careful mechanical position of the parts in lesion and applying a thrust is a method that has merit in certain cases. After all it is doing the work with a minimum of friction that really counts.

But the elucidation, the diagnosis, of the mechanical principles, from a single lesion to various curves, under constantly varied and varying conditions, is necessarily difficult.

SIDE BENDING

There is no one type of spinal side bending, as there are types of flexion and extension, but the character and distribution of the movements are wholly dependent upon whether the spine is flexed, erect, or hperextended, when the side bending is performed.

Side bending in the flexed position of the spine is a more evenly distributed movement in which the dorsal region participates more and the lumbar region less, than in the erect

position. The greatest deviation from a line connecting the two ends of the spine at about the eighth dorsal vertebra in both cadaver and model. In short, side bending occurs higher in the spine in flexion than in any other position, the lumbar region being comparatively locked against side bending by the flexed position. The more marked the flexed position, the higher in the spine is the side bending localized.

In the flexed position of the spine, side bending is accompanied by rotation of the vertebral bodies toward the convexity of the lateral curve. This rotation occurs chiefly in the dorsal region.

Side bending in the erect position is, therefore, largely a movement occurring in the neighborhood of and below the lumbar dorsal junction.

Rotation accompanying side bending in the erect position.—In this position side bending causes the rotation of the bodies of the vertebrae to the concave side of the lateral curve. This, however, occurs lower down in the spine than in the flexed position. The dorsal region participates less and the lumbar region more in the movement.

With the spine of the cadaver, model, or child hyperextended, the side bending becomes a sharply limited movement, localized low down in the spine and occurring almost wholly below the eleventh dorsal vertebra; becoming, therefore, essentially a lumbar movement. The dorsal region bends as a whole upon the lumbar and rocks over to the side practically unchanged, being locked against side bending by the hyperextended position.

Side bending, therefore, is situated highest in the flexed position lower down in the erect position, and lowest in hyperextension in the model, cadaver, and child.

Rotation accompanying side bending in the hyperextended position.—This is a sharply limited movement occurring in the lumbar region, including the twelfth dorsal as functionally a lumbar vertebra. The thorax rocks over to the side unchanged, and the rotation of the bodies is to the concave side of the lateral curve.

ROTATION

Under ordinary conditions it is essentially a movement of the dorsal and cervical regions in which the lumbar vertebrae take but little part except in hyperextension and with the use of traction.

Rotation is freest in the erect position and is situated in the cervical and dorsal regions, reaching its maximum at the top of the cervical column and extending down the spine to the lower dorsal region, where it disappears.

The rotation in this position is accompanied by a side bend of the rotated region away from the side to which the bodies of the vertebrae turn. If the rotation is to the right, it is accompanied by a lateral bend convex to the left and *vice versa*.

Rotation in the flexed position of the spine occurs chiefly in the cervical and upper dorsal spine, the lower dorsal and lumbar region seeming locked against rotating forces by the flexed position.

In hyperextended positions, rotation with moderate manual force occurs as a twisting of the whole thorax on an axis in the dorsolumbar region, the upper- and mid-dorsal regions apparently being locked against rotation by hyperextension.

Rotation, therefore, is located high in flexed positions, lower in erect positions, and is situated lowest and is more sharply localized in hyperextended positions.

A lateral deviation of the spine accompanies all rotations. It is situated at the site of the rotation and is convex to the right when the rotation is to the left and *vice versa*. In the erect position, rotation causes a marked side curve in the dorsal region.

THE CERVICAL REGION

Side bending is accompanied by rotation of the bodies of the vertebrae to the concavity of the lateral curve, as in the lumbar region.

Rotation is accompanied by a side bend convex to the side opposite to which the bodies of the vertebrae turn; that is, in a right rotation the curve is convex to the left.

DORSAL REGION

Side bending here is always accompanied by rotation of the bodies of the vertebrae to the convex side of the lateral curve.

Rotation is accompanied always by side bending, the lateral curve being convex to the side away from which the bodies of the vertebra turn. In a rotation of the top of the column to the left, the lateral curve is to the right and *vice versa*.

LUMBAR REGION

The rotation accompanying side bending in the lumbar spine is always with the bodies turning to the concavity of the lateral curve; which is to be contrasted with the opposite rotation occurring in side bending in the dorsal region.

In flexion of the whole spine, side bending is accompanied by rotation of the vertebral bodies to the convexity of the lateral curve, the characteristic of the dorsal region.

In the erect position and in hyperextension of the whole spine, side bending is accompanied by rotation of the vertical bodies to the con-

cavity of the lateral curve, the characteristic of the lumbar region.

Rotation in the dorsal region is accompanied by a lateral curve, the convexity of which is opposite to the side to which the bodies of the vertebrae rotate.—*Lovett.*

Here, in our opinion, is one of the most pregnant fields for osteopathic research work. It is a work that every practician is most vitally interested in; it comes right home to his every day work, the "delivery of the goods" problem.

If the reader is desirous of some really difficult mental exercises, we can specially commend his first studying Lovett's book; next Tubby's two hundred pages on symmetry of the body, physiology of the spine, and curvatures, particularly noting his criticisms of Lovett; then apply all of this with his osteopathic conception of the lesion upon a series of patients. Make a rough outline drawing of the spine and pelvis and note the effect of specific adjustment upon the configuration. One thing is certain, he will gather some valuable ideas of the utmost practical help.

Probably we have often emphasized isolated lesion at the expense of their resultant greater or less effect upon the entire bodily mechanism, particularly the spine and pelvis; that is a single spinal lesion rarely does not exist alone, but almost invariably, through its side bending rotation effects, involves several or many others by way of secondary and compensatory changes, in order that the line of gravity will be brought over the base of support. Although the compensatory and configuration changes are important, still they are largely secondary; in our opinion, the most pronounced pathologic damage is initiated at the site of the primary lesion. The more precisely we can locate the "key" and specifically adjust it, the greater our success will be.

Our several years' personal contact with Dr. Still's technique clearly revealed the dominant point that, in any given case, he always was looking for the primal lesion; some point that was the "key" to the spinal irregularity. And he always was just as insistent upon a definite, localized and precise technique as he was insistent upon a precise diagnosis; and both based upon the exact character and degree of the vertebral deviation.

The above figures are not drawn to any scale; and they exaggerate the lateral deviation. This is only a preliminary sketch. We could as easily have drawn an additional score of variations and combinations. It is presented for what it may be worth to the reader. Personally it means a great deal to us. We believe there is a world of work to be done here before we can clearly understand the full significance of the osteopathic lesion. The observer will have to be specially careful in interpreting his clinical data. Crossed asymmetry will frequently be in evidence, which at times is very confusing, particularly where the static change is due to a spinal osteopathic lesion, for there will be variation in standing, sitting, etc.; and in some instances, should you not see the patient for ten days or two weeks, there may be quite a new picture presented, although the primal lesion will remain the same as to locality. Then in addition, the problems of muscular sufficiency and nutritive integrity, etc., in their relation to spinal equilibrium are always present. It is the localized and anchored lesion that dominates the picture osteopathically, and this deserves first consideration.

14 W. Washington Street.

TREATMENT OF INFANTILE PARALYSIS

Evelyn R. Bush, D. O.
Louisville, Ky.

The paralysis to be considered is due to the destruction or abnormal condition of some of the nerve cells in the anterior horns of the spinal cord. Since the unfortunate ones who are victims of this disease are generally children, and therefor the growth and development incom-

plete, the treatment, aside from osteopathic manipulation, is largely educational.

These cases require experts not only in osteopathic manipulation, but educational experts, educational in its most comprehensive sense; that of spirit, mind and body. I put them in the order of their importance, for in these cases the complete co-operation of the child in spirit and mind, materially hastens the recovery of the body.

Rarely do we get these children before the word "paralysis," with all its dire and doleful meaning has been impressed upon the parent and child, by some tactless and would-be "frank" physician (osteopathic or medical) or by some kind friend, who pictures the possibility of years' of helplessness for the child, and an endless burden to the fond parents.

Remember that, while the judgment and advice of osteopathic physicians, as well as those of the "regular" school, are of inestimable value, their prognosis is never infallible. Remember, a negative prognosis, though positively given, proves nothing to the mind and heart of an intelligent and loving parent; nor does the darkest thought or proof, past or present, of the profession, close the door of possibility.

Of course the line of treatment depends upon the length of standing and severity of the disease, as well as the age of the patient, and last, but by no means least, intelligence and unselfishness of the parents. It is a waste of time in this article to dwell upon osteopathic manipulation in these cases. The lesions requiring osteopathic skill are so obvious that the slowest may read as they run. Right here let me advise the three-minute-treatment, specific lesion osteopath, to let these cases alone. They take time, exquisite care and patience, and an almost painful regard for details.

Let us begin by training the parents, particularly the mother, for she is more constantly with the patient. First, the words "paralysis," "crippled," "afflicted," "burden," etc., are positively and entirely eliminated from the family vocabulary and the thought atmosphere around the patient. At no previous time in the history of the world has the power and influence of thought received the close and discriminating study that is now being focused upon it. We, who are young in the work and study of this branch of therapeutics let us speak softly, lest we display our ignorance or retard the progress of some earnest and independent investigator, struggling along untried paths.

Following the acute stage, absolute quiet and rest in bed is an essential. As soon as condition permits, begin giving gentle massage every three hours during the day. Don't waken patient of course. As strength returns, the patient is given joint movements with the massage, then resistive movements. These exercises are given at first passively and then actively as the case develops, the idea being to have all muscles as tired by night from natural exercises, as those of a normal child. Be careful not to tempt him to go beyond his strngth. Go too slowly rather than over-tire.

Upon the ability and ingenuity of the one in charge in devising special exercises to bring into play every muscle and give it normal activity depends much of your success. Not only must you inspire the child, parents and attendants to put forth every effort, but you must stand for the embodiment of power and assurance that it can be done, remembering the habits of helplessness are quickly and easily formed, and broken only with difficulty.

A "walker" made in the following manner is of great value: Use drilling or some firm wash material and fit a square yoke to the child's shoulders. Cut out low under arms. Sew a broad piece of the same material across the back of yoke and pass it between child's legs and button to the yoke in front. Button two straps on back of shoulder and two in

front. These straps are attached to an iron hoop, which may be suspended by a spiral spring from center of the door or framework on side wall. Better still, a six-strand wire stretched across room with pulley running along it and walking apparatus suspended from it offers a splendid opportunity for leg and arm work. Arrange chairs or tables along line of wire. Many different toys are thus within reach and furnish various and excellent means of both training and developing impaired muscles.

The feeling of freedom in this position affords a repetition of the same exercises hundreds of times without monotony. If properly handled, the exercises will react on the mind and spirit and the grit and determination developed through happy means hasten the muscular strength and nerve control.

Have children of the same age about. It is of great value in these cases. Remember we do not pity him because he cannot do as others do, but praise him lavishly for every little development made. We do not lessen his difficulties because of his condition, but rather increase them. Our natural instinct is to rush forward and help in the accomplishment of a movement which the child needs to do himself for his own ultimate cure. In this case he loves best who does least.

It is difficult to find assistance outside of the family, no matter how conscientious, who will continue constant and faithful effort and treatment, when oftimes for months little or no improvement is seen. This is true of the physician as well as the assistants in the home, yet it is advisable to have continuous treatment under the same guiding hand through months and years.

We can never give a positive diagnosis in these cases, as each case is a law unto itself, yet there is a possibility of improvement in all of them. There is never a time to stop until the end, the cure, is reached, be that time months or years. There is never a time to be discouraged. Persistent and conscientious treatment, with the bulldog grit of "never let go," is the essential.

Bush Sanitorium.

OSTEOPATHIC TECHNIQUE

L. L. Draper, A. B., D. O.
Philadelphia

OCCIPITO-ATLANTAL ARTICULATION

Having considered the diagnosis of subluxations of the occipito-atlantal articulation in previous numbers of the Journal, we now offer the following methods or reduction:

Bilaterally Posterior Occiput. (The subluxation in which the occiput is maintained upon the atlas in the position of flexion.)

The patient is upon the table in the dorsal decubitus. The operator stands at the head of the table, facing the patient, and draws the patient's body toward him, to have the head off the table in a freely movable position, supporting it with his hands. A pillow is placed against the vertex of the patient's head, and the operator's abdomen is applied against the pillow to maintain the head in the position desired. The operator applies his hands against the side of the patient's head in such a way that the palms lay upon and cover the patient's ears, the thumbs rest in the hollow of the cheek at the point of meeting of the teeth and the palmar surfaces of the fingers rest lightly under and against the posterior borders of the mastoid processes of the temporal bone and the transverse processes of the atlas. Both hands support the head, together with the operator's abdomen, and, aside from this support and the information they impart to the operator during manipulation for correction, they do nothing else save direct the occiput in the direction in which it must travel. Please note that there are constantly perceptible to the palpating palmar surfaces of the index and middle

fingers of each hand two diagnostic points—the posterior surface and tip of the mastoid process of the temporal bone and the posterior border of the transverse process of the atlas.

In order to thoroughly appreciate the mechanism of the movement we are about to describe, it will be well to observe now the fact that, as forward pressure is made upon the vertex of the patient's head by the body of the operator, the head is forced into hyper-extension upon the neck, and, quite naturally, the occiput into hyper-extension upon the atlas. The palpating fingers are aware at this time of the increasing prominence of the posterior borders of the transverse processes of the atlas behind and below the tips of the mastoid processes. This movement, then, is corrective in itself, for it is very perceptible that when the occiput is forced through a movement of hyper-extension upon the atlas, it is re-traversing the path it took to become fixed in a position of flexion—i. e., to become bilaterally posterior.

We wish, however, a more specific and complete method of reduction than may be obtained through such a simple procedure, which, if continued over a sufficient course of time, must prove corrective in part at least. With this in mind, therefore, we maintain the head in hyper-extension by the steady pressure of the abdomen against the vertex, and, at the same time, direct the patient's chin in a line pointing to the shoulder on the side on which our effort is to be directed. We wish to emphasize the need of steady forward pressure against the patient's vertex in order that constantly, and not intermittently, the occiput may be maintained in hyperextension upon the atlas. The reduction of this subluxation will be a slow process. There will more often be imparted to the palpating and supporting fingers no sudden give or sliding of occiput upon atlas, although occasionally will this occur. And never will reduction be made with the "pop" of which we are all familiar.

So far we have the picture of the occiput hyperextended upon the atlas by the abdominal pressure of the operator against the patient's vertex. The movement that directs the patient's chin in the line pointing to the patient's shoulder, is a movement of the operator's body, so made, that, when the chin is in line with the shoulder, the operator himself is facing the shoulder rather than the median line of the table. Let us particularly emphasize this body movement. By it is transmitted all force concerned in reduction of this subluxation. The feet of the operator do not alter their position on the floor at any time, but by a rotary movement, beginning at the ankles and including all articulations above them, he puts his body through the necessary steps. We assume that we are concentrating our efforts upon the left occipito-atlantal articulation. The occiput is extended and the patient's chin is directed toward the left shoulder. Likewise, the operator is facing in that direction. Steadying the occiput in this position for a moment, we note by palpation that the interspace between the tip of the mastoid and extremity of transverse process of the atlas on the left side has been increased. We note, furthermore, that this interspace on the right side has been decreased.

The significance of these observations is that on the left side, shown by this widening of the interspace between mastoid and atlas, the occipital condyle has become less closely applied to the superior left articular surface of the atlas. Consequently there must ensue greater ease and freedom of movement in this articulation as we proceed with the manipulation necessary for reduction. During the foregoing and succeeding movements, at all times must the face be kept squarely in the median line. To make this more clear let us imagine the sagittal suture as a plane dividing the head into two equal parts. This imaginary plane must always, then, be kept in the vertical position, otherwise the effort at correction will not be fully effective. Having, therefore, pointed the chin toward the left

shoulder, with occiput in hyper-extension as described, the sagittal suture in the vertical plane, we now lift the base of the head up and over to the median line of the patient's body, at the same time increasing the forward pressure of the operator's body so as to apparently over-hyperextend the occiput upon the atlas. When the median line of the body is reached, we now allow the patient's head to pass into the position of erection, as before original hyperertension was enforced. Let us emphasize the fact that the body of the operator is constantly exerting the forward pressure against the head of the patient except at the end of the movement just described.

Constantly is the operator aware of the position of the occiput upon the altas as reduction is being made. He feels, as described, the widening of the inter-space between the mastoid and the atlas on the left as the head is side-bended toward the right. He notes the opposite condition on the right side. He is conscious of the fact that the occiput is sliding forward upon the atlas by the increasing prominence of the posterior borders of the transverse processes of the atlas behind the mastoid processes of the temporal bone. He knows when the limit of this forward progress of the condyles of occiput upon the atlas has been reached for at that time the transverse processes no longer continue to become more prominent behind the mastoids and, as the head is lifted over to the median line and allowed to fall into the position of extension upon the neck, they recede from the fingers, to finally become stationary. This movement is repeated several times on the left side. Always it is done by a movement of pressure of abdomen against vertex through the pillow, combined with the necessary shift in the operator's body to make the occiput move backward, outward, farther backward, then to be lifted over to the median line by the hands and allowed to pass into normal position of extension.

Having gone through this manipulation on the left side, our attention is now directed to the right occipito-atlantal articulation and an exact counterpart of the movement just described is made upon the right. The opposite observations, in detail, will be made here to those observed when reducing the left articulation. The same number of movements should be made upon this side as upon the left. Reduction cannot be expected in any given number of adjustments.

Some posterior occiputs will defy for long periods of time all efforts at correction. Some will respond more quickly. Some will be felt to slide or slip into place, some will gradually move into place as adjustment is continued. Some, perhaps, may never be reduced, good movement only being secured: but with goo dmovement must return much of the function that has been disturbed. Occasionally one side will be quite tender and this will necessitate less erextion by the operator and a greater number of treatments, if correction is to be made.

Real Estate Trust Bldg.

This row of Apartments is the recent purchase. The frontage of this is considerable; the first purchase fronts fifty feet.

This substantial and attractive old residence is the building first purchased and now occupied by the Institute

THE ENLARGED HOME OF RESEARCH INSTITUTE

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Editorials

ANOTHER BUILDING

The cut below shows the latest purchase by the Trustees of the A. T. Still Research Institute. Dr. Bischoff, Secretary of the Board, learned that the building was on the market, and ascertained the the terms on which it was offered. When the facts were presented to the Trustees they voted unanimously in favor of the Institute buying the property.

The Institute had to have that property sometime or hunt a new location for its larger institution. Others were considering it, including the promoters of an Italian hospital, and if we let it go now we probably could not get it later.

The price is $20,000.00, payable in instalments. It rents for $3,000.00 a year, as a private hotel, under one management. For the present it will be carried as an investment, the income going into the Current Fund, just as the income from our other investments. When the endowment fund has grown large enough to support the work without this, the building can be used for postgraduate school and hospital. Finally all these old buildings can be torn away and replaced by the large new building we want.

This action of the Trustees represents their capitalized faith in the profession. They might sell enough of the present six per cent endowment securities to pay for this building, which will pay ten per cent or better, but they have faith that the profession will soon raise another $20,000.00 to pay for the building, and so have the income of both the six per cent securities and the ten per cent building.

This transaction brings the day of the full working Institute very much nearer. If 2,000 members of the profession would become $1-a-month contributors, the Trustees could plan for the postgraduate and hospital work in another year.

If in this way we show ourselves alive to the best and alert for advancement, there will be those outside the profession who will help. But they will not become enthused if we show ourselves insensitive to the possibilities that lie before us.

It has been said that the hardest thing for the average man to do is to lift his eyelids. In establishing the Institute the osteopathic profession has shown that it is above the average. Without the larger vision and the wider outlook it would not have realized the need, nor felt the incentive, for such a development.

C. M. Turner Hulett, D. O.

THE HOME OF RESEARCH ENLARGED

Less than a year ago the profession was greatly encouraged by the announcement that the Research Institute had a home provided for it. In one of the best sections of Chicago, in the hospital dis-

trict, a splendid residence property was bought by the profession in Illinois, and as our readers are aware, has been fitted up and now houses actual and active research work. As will be seen from the accompanying article by Dr. Hulett, the Research Board has purchased the adjoining property. In doing this, three objects are met: First, this provides ample ground for the new buildings, which in a very few years all of us hope will be required and provided; second, it prevents the necessity of moving within a few years, which would be required if this property should be covered with permanent buildings, the first property while ample for a start will not meet our growth, which we trust will be rapid; third, when $20,000 will buy property which rents for $3,000 annually it is an excellent investment.

Now the point we want to make is that if the profession in Illinois took care of the original purchase which secured for us a home, the rest of us certainly should provide at once the capital necessary to purchase this additional property. On December 1st, each member of the profession is asked to send in $6.00, that being the semi-annual payment on the dollar-a-month plan.

Certainly most of us, if our heart is in this movement, can spare $6.00 twice a year for a few years to establish this Institute. If we can't spare $1.00 a month, we can at least spare $1.00 a year, and we ought to do something, everyone of us, for this cause.

The JOURNAL wants to urge upon the profession to take care of this new purchase so that the Board will not be compelled to interfere with the investments already made. It should be such an easy matter for five or six thousand practicians to care for a payment of $3,000 or $4,000 a year for a few years that the mere announcement of it should be sufficient to bring in at once the needed funds.

Certainly this research movement now is going forward and it should be an inspiration and encouragement to the whole profession. As to whether the profession is inspired or encouraged will be evidenced by the manner in which we respond to the notices sent out within a few weeks.

ON EDUCATING OURSELVES

The entire profession, so far as we have any record of the addresses of the members, has recently received literature regarding the enlarged plans of the Association for publicity. A three-line-advance has been ordered. First, the *Osteopathic Magazine*, a layman's monthly, to acquaint the friends of osteopathy primarily with the profession's activities, first in its own professional matters, and then in all of the social and civic problems in which its members should be and are interested or engaged. Second, the Press Bureau, which will undertake to aid in securing proper publicity in the public prints concerning the osteopathic movement and particularly to answer and refute scurrilous and untrue references made to the practice of osteopathy in the newspapers of the country. Third, the organization of an Associate membership and the encouragement of popular lectures by the organized profession of all of our cities and towns.

Whether or not we succeed in these will depend not upon the willingness to work and ability of those having these several activities in charge, but upon the support, moral and financial, which they receive from the members of the profession. Here we fear will be our greatest undertaking, to educate ourselves to the point of really co-operating in these professional activities. If we establish

with the public the fact that we represent in every sense a professional movement, we have first to get that idea deeply rooted in our own consciousness.

We do not intend to magnify troubles in advance, but retrospection shows us that we have not co-operated as we should have done. In most of the states what has been accomplished in securing legislation has been done by a few and this includes not only the work done, but the necessary finances raised. Our organizations, state and national, are supported by barely half of the professional strength.

Besides we have not co-operated in helping those who have made undertakings which while personal ventures are still necessary for the development of the profession. This is true of our support of the schools. The JOURNAL has time and again within recent years urged upon the profession that, in spite of the fact that the schools are private property, it is absolutely our duty to support them to the extent of using our every influence to induce capable men and women to enter them as a condition to taking up osteopathy as a profession. We can, and we believe should, use our judgment and discretion as to which schools we recommend. It is our privilege to be informed as to which schools are doing thoroughly osteopathic work and which are working in harmony with the profession, and as far as possible throw support toward them. The JOURNAL has further pointed out that if the schools could be put upon some co-operative basis instead of remaining private property, that the profession would be very much more interested in their support. But the main thing is that we must support the profession and the primary support of the profession is to keep the schools well filled with those who will make creditable osteopathic physicians.

Again, we have a number of osteopathic text-books prepared by loyal and competent members of the profession. These have been on the market, many of them, for a dozen years and have gone through one or more revisions, but they have never been supported. Probably a thousand, or two thousand copies at most, would cover the circulation of any of them, when all of them should have gone to five or six thousand copies.

Within recent years, perhaps half a dozen sanitariums have been established where osteopathic treatment as well as the best institutional work for the sick could be had and yet the proprietor of the largest and most successful of these recently told the writer that he could count on his figners the patients that had been sent to him by members of the profession when his institution has been before the profession for six or seven years. We are sure the others would tell a similar story of lack of professional support. As to just why this should be so, it is hard to figure. Whether the members of the profession have not confidence in those conducting these institutions or whether when they fail on a case they are unable to keep them under osteopathic care under more favorable circumstances is not clear. Certainly we make a big mistake here. In these institutions, if the treatment is proper, certainly the best result possible will be secured, and results impossible outside are usually obtained. Besides, these institutions are absolutely necessary if we are to round out our professional movement.

We are slowly getting clinics and hospitals in our larger cities, but very slowly. Here the same lack of co-operation is responsible. There are usually a few who recognize the importance of the work and

are willing to give their time, but the members usually are slow to give their co-operation.

In endowing our research movement it has required seven years to do what easily should have been accomplished in two. So that now when some time and money are to be given by a great number of us, if these movements succeed, we have fears that the response will not be as prompt and generous as it should be. However, it may appear to the most of the profession (as indeed it is) that these movements aimed at publicity, while professional rather than personal in nature, yet should yield very prompt individual returns.

The paragraphs above are in no sense fault-finding. There are reasons why we are slow to be interested in matters which are co-operative rather than individual; but the reasons for our overcoming this and becoming truly united and co-operative are so powerful and imminent that we wish to urge them again upon our attention. Not only is there need for our co-operation in professional matters, but there is equal need for our interest in social and civic matters. The physician has come to be a leader in these activities in his community, and rightly so. Many of them are over-politic and all of them no doubt expect professional returns from these activities in public matters; but be that as it may, their interest in these matters is to their credit. As we have pointed out in other articles, it is harder for the osteopathic physician to take his place in these lines of work because of the position he occupies before the law as a representative of an unrecognized practice or a practice with a limited recognition. But in spite of this we are all men and women and if we show ourselves such with the proper spirit, that of usefulness and helpfulness, because of our peculiar knowledge of those problems which are being solved, we shall have little trouble without any obtrusion or offense to take our place in these activities.

There are a great many organizations nowadays (one sometimes thinks when he reads some of their titles that the names for them have become almost exhausted), which are aimed at the betterment of life and living conditions. Some of us should find our place in all of these movements. With a great many of their adherents they are fads. With others there is a sincere zeal with little knowledge. We should be of real assistance and if we are informed as we should be, we will soon find ourselves welcomed if we take our place in this work.

A correspondent has recently called our attention to the fact that at the recent Internation Congress of School Hygiene, 396 speakers were on the program—215, or considerably more than fifty per cent, were physicians of the old school. Now, perhaps we should find it difficult to secure a place on our program for one of our number, but take any other local or state program of an organization of this kind and you will see about the same proportion of "regular" physicians and about the same conspicuous absence of those of any other school. Now, these physicians, with all of the institutions and state and national recognition back of them, make it possible to thus monopolize all of these movements, and while we have no desire to displace them, we should at least interest ourselves in the movements and secure places on these programs for our representatives. Things are stacked against us and they will remain so as long, but only so long, as we allow this as a reason to operate to pre-

vent our becoming interested in this semi-charitable and humane work.

We have no wish to scold. We have no wish to find fault or complain. We have no wish to repeat and dwell upon this neglect of activity along professional lines, as well as along civic and humane lines outside of the profession; but we confess to a grave fear that we are hampering our own individual growth and we are running a risk of getting ourselves in a wrong position before the public, our best friends and our only hope, if we continue to give our attention almost solely to personal and individual considerations.

The Journal, therefore, wishes to express the hope that the *Osteopathic Magazine* and our publicity movement may first take hold of the members of the profession and that it may be the means of making us see clearly what, as a profession, we ought to concern ourselves in.

If it does this, and only this, it will perform the highest service, though we have no fears but that it will reach the public and carry to it a message that will be helpful to it and profitable to us but may it also arouse us to our duty and wider fields of usefulness as these pages have not been able to do!

PERSISTENT EXERCISE FOR MUSCLE ATROPHY

Muscle atrophy following spinal cord lesions, particularly in children causing more or less complete paralysis, has in recent years received well directed treatment, and has been rewarded with remarkable success. The work to which we refer has been done largely by the orthopedists and it is because of this that we wish to write.

By this statement it should not be inferred that we begrudge the orthopedists the success they are achieving; we wish them Godspeed. They are doing a work, too long neglected, for the constantly increasing army of helpless little ones who constantly call upon our sympathies and for a great part are a charge upon the municipality or state. Let all who can, help the child!

In the treatment of the condition of which we speak, the orthopedists use some methods which we might add to ours and they could learn much from us or profit greatly by having our aid. It is a fact that some remarkable discoveries have been made, or revolutionary methods have been successfully employed, in the correction of gross structural deformities; and some of these have been directed to our specialty—the spine. Why did we not make them? True, the modification of the congenital hip deformity operation done by the osteopaths is undoubtedly a big advance over any methods used by others. Why have we not more such methods to call our own?

If we honsetly answer this question we shall assign at least a part of the cause to prejudice. Osteopathy was launched under peculiar circumstances. Its concept of disease and its application of remedy were equally strange at the time. The osteopath looked upon himself as a representative of a distinct system and emphasized its difference from existing systems. Without doubt that attitude was wise. Had it shown much in common with existing systems its danger of absorption would have been very great. Again, to emphasize its distinctiveness was of practical value. Dr. Still used to say to the student. "You go into people's homes and use the same instruments and appliances and methods they have seen and had used upon them and they at once say, 'It is the same old thing. I thought it was a new system, but the new name is all. What is the use?'"

So the early osteopath went forth to smash idols and as far as possible to disillusion people and consequently to have little in common with other systems, and he also went forth to do a limited practice, a specialty work. Keep this fact in mind as you follow this discussion. To a certain point this worked well, for it forced him to apply and test his distinctive methods and limited these to a narrow field; but soon, in spite of his wishes in many instances, his practice was extended from the specialty work he had expected to do until he was doing the general practice of physicians. However, while he was giving all of his attention to developing the application of the principle of adjustment, the practice of correcting structural deformities of a grosser character was being taken up seriously and prosecuted successfully by others.

Cases presenting these gross lesions were coming to the osteopath also, and naturally, for many looked upon him as the "Bone Doctor;" but his environment, his understanding of his mission, caused him to give little or no attention to the methods employed by the orthopedists and he applied to these deformities the same methods he used in correcting lesions which he alone recognized and which his work later forced the world to acknowledge. For the same reason he made no use of the plaster bandges, braces or other artificial supports. It was his business to take this apparatus off of people largely for the reason that physicians of other schools of practice had put them on.

"But what has this to do with exercise and muscle atrophy?" you are ready to ask. This: If we are to treat the subject intelligently we must clearly see the premis. In getting at the cause we want the environment under which we have grown up, in a sense the personal and family history. This we are here trying to give.

The earlier graduates at least, partly because of the prejudice above referred to, and partly because they were not taught along these lines, have, as a class, failed to use many appliances both of diagnosis and of treatment, and still hold practice to a limited class of work. Many of these appliances and methods in conjunction with our work are not necessary nor helpful, but many of them are. Only recently have we come to use the plaster bandage, for instance, either in the treatment of hip dislocations and deformities or in the treatment of weak and deformed spines. The same is true of the use of braces in weak limbs and tubercular joints.

We might extend this disregard for existing methods to the so-called physiological considerations, such as diet, exercise and the effects of environment and heredity. At least many of the early osteopaths approached a case with the belief that a physical lesion was the *sole* cause of the trouble, and hence the removal of that lesion was his concern for the cure. He reasoned something like this: I locate a lesion which connects up nervously with the disturbance. If I can fix that, it matters not about the diet or habits, they are natural to the patient, or how much his ailments resemble those of others of his family, the cause being removed, health will ensue. Now, it cannot be denied that there is some psychological — curative — effect in this taken in connection with a *new* system. But in time changes come about. We find, and people find, that they need all the means of help available, and nothing short of the whole truth applicable to the case is sufficient. And so, without in any sense loosening our hold upon the osteopathic lesion as the causative factor

in disease in the distinct sense in which it was early taught and accepted, we may educate ourselves to recognize that it may not always be the whole cause of disease and consequently efforts at its removal not the only consideration in treatment. With a firm grasp upon this we are safe in extending our practice from limited office work and thus give a greater number of people the benefit of this remarkably successful system in their more complex and serious ills, also. As we study at times to get our bearings, let us keep this firmly in mind: We have been rapidly passing through a transitional period, from a limited office practice to the development of a well rounded, universally applicable system with the principle of that specialty the center and basic thought of the school of general practice.

To many of us all this is entirely clear, but many other younger practicians are not familiar with this development and evolution. We regard it as most desirable that all of us should understand it, hence it has been taken up at length.

A point we want to make here is that with most of us who are practicing it, osteopathy is sufficiently well defined to justify us in using whatever apparatus would be useful. The patient is entitled to it. We are entitled to it, and we should allow prejudice no longer to prevent our using anything, and we should study carefully the methods of those who are working along the same general lines as we are and profit by their discoveries and successes just as they are doing by ours, and no feeling of rivalry should grow up on that account. We are engaged in the same work, the saving of cripples from lives of invalidism and dependence.

As indicated above, there are vast numbers of children and young adults crippled as a result of inflammatory conditions chiefly to the anterior horn of the cord, resulting in motor paralysis and rapid atrophy, if not degeneration, of muscular tissue. Until comparatively recently, when these did not spontaneously recover, there was little or no help for them. Osteopathy has done considerable for them; but we believe the usual treatment given did not go far enough. Attention for the most part was directed to the spinal conditions found, which maybe were part contributary and part result of the disease, with some attention given to manipulations and passive exercise of the impaired muscle. Usually these cases had been of several years' standing before seeking our aid. Considerable improvement, or fancied improvement, was apt to be noted at first. Following this was a long period of little or no gain. Then discouragement and disappointment of both physician, patient and friends caused the treatment to be discontinued and set down as a failure.

We have assumed that the lesion in these cases is to the nervous structure. We have assumed that the nerve force, and not muscle competence, is at fault. Primarily of course the nervous structure was attacked and undoubtedly the nervous structure remains fearfully impaired years afterward, but the idea we wish to consider is that maybe attention should be directed more to the muscle tissue. Where the condition is due to traumatism, and particularly where it is due to infection, we know that nerve tissue has suffered, and many cells destroyed. But not all the motor cells to a muscle group are destroyed, and the time and skill we shall later discuss are needed to build the connections and find the new paths. In addition to this, we know that the results of the inflammatory processes have greatly interfered with the function of the nerve fibre, if indeed much of it was not supposed to have been destroyed

as a result of the inflammation, or the long period of disuse following, and disunion from the gray matter. In the acute stage we watch the rapid atrophy and loss of tone and strength of the muscles supplied by the nerves involved and assume that they are entirely cut off from the nervous system. Weeks and many times years pass before there is any improvement, before there is any evidence of a reestablishment of connection between cord and periphery, and the muscle lies in a dormant state for this length of time. *Use*, contractility, is the function of muscle. Even where its nervous connection is not impaired it rapidly loses tone and strength under enforced disuse. The point we are getting at is that maybe the muscle remains incompetent to move the member it was intended to move more because of this disuse and because of its atrophy and weakness, than entirely because of the fact that the nervous connection is not partially reestablished.

To be sure, this fact may be ascertained by certain electric currents, but if a careful examination is made of the helpless limbs of many of these children, muscles which are no longer able to move the member, may be felt to make the response when the child is told to try to make certain movements which he cannot accomplish. This shows that the nervous pathway between the muscle and the cord and brain is at least to some extent reestablished. Now let us consider the muscle from another standpoint. To illustrate, take the leg. The group of muscles which should extend the leg is often paralyzed. In the infant the foot representing the weight is eight to twelve inches from the fulcrum at the body and weighs perhaps a pound. In a child of ten or twelve it is almost three times as far from the fulrum and the lower leg weighs maybe five or six pounds. Now, the muscle that was able to move it in infancy is no longer able to move it at the present time for the reason that the muscle perhaps is no stronger, if as strong as at infancy, and the conditions abovementioned call for greatly increased power. Again consider the infant: Hardly a wakeful moment but what every muscle of back and extremities is in motion. It is undergoing exercise to meet the increased weight and leverages which rapidly advance. Now, if the muscle in the paralyzed child ever moves the limb or sustains the body weight, that function must come back only by the means by which it originally grew, viz: exercise, and one can't exercise for the paralyzed child any more than he can exercise for the growing infant; the child has got to do it himself.

In regard to treatment, of course manipulation directed to establishing a better nutrition of the cord involved for its repair as well as for absorbing the sequellae of inflammation about the nerve trunks should not be neglected. Besides, deformity of structure may exist or may be threatening. This treatment we have always given; but from this point on we wish to suggest a fuller and larger treatment. Manipulation, certain forms of electricity, massage, passive movements, etc., all have good effect, in fact are essential in the early stages, and useful later. Moderate stimulation increases the flow of blood to the member and aids in the general nutrition. Later manipulation is necessary to prevent and overcome stiffness and deformity, but all of this does not complete the treatment, and is not the treatment we wish to emphasize.

There are two features in that treatment. First, the element of time; and, the second, the element of active exercise

of the affected muscles. As indicated earlier in this article, few of these cases get treatment extended over a sufficient length of time. It requires a long time to reestablish nerve connection, and it requires a long, if not longer time, to develop muscle tone; but suppose it requires five years to restore a child or young adult to health, what of it? No one would question that it is worth it, and because results are not obtained in one year or in two years is no reason why they will not be secured in five years.

The other and chief element of treatment we wish to speak of is *active exercise of the muscle.* How can this be done when a muscle that has barely the strength to wiggle a finger is called upon to raise the hand or forearm? Two things are to be kept in mind in the treatment: Well directed, intelligent effort toward the mental and physical reestablishment of nerve control; and exercise of the muscle for the purpose of its own strengthening. Dr. Bush, who has secured almost miraculous results, well presses these points, particularly the former, in an article printed in this issue. Our purpose is to give our readers some methods that are successfully employed in the active exercise of muscles.

First, as we have said, the muscles *affected* are the muscles to be exercised. If the extensor muscles are most affected or entirely incompetent, use of the flexor muscles will amount to but little for the restoration of tone to the former. The serious question is how to exercise a muscle that barely has the power to move. First we would suggest that exercise under water is of primary importance. Many a child or young adult who is unable to stand or move the feet can if placed in water up to the arm pits, stand upright and walk fairly normally. There you get the perfectly normal movement of the muscles you seek to develop and besides you get the powerful encouragement to work when the invalid sees he can stand and walk. In most of our towns gymnasiums can be found where these patients can have swimming lessons and exercise in water. Smaller children should be put in the bath tub, and even where they cannot stand, the helpless limbs, supported by the fluid medium, can probably be moved at will. Remember how the infant, to which we referred a few paragraphs back, develops his strength, and keep these patients everlastingly at it. If we do justice in our treatment they will work harder throughout a day than the well child does at school or at play.

One other suggestion: Have the children who are able to stand exercise before a mirror. Some successful orthopedists have their rooms where instructions are given surrounded with mirrors so that the child can see what he is doing. The same encouragement and stimulation comes from this as from being able to walk supported by the water. Another point; usually the two members of the upper and lower extremities are not equally affected. If the child is directed to make or attempt to make the same movements with both members, the use of the better member seems to aid the other. The most valuable passive exercise is working against resistance; the attendant holds the limb, partially resisting the feeble movement the child makes.

Then, again, there are the braces which osteopathic physicians generally condemn, the reason assigned being, first, weight; and, second, that exercise without assistance is wanted. The weight may be undesirable, and unassisted exercise is desirable; but many of these with the aid of the braces can walk, can get exercise and normally use the affected

muscles, which may be impossible without this help in sustaining the body weight. We want to consider this feature and keep constantly in mind that the one thing is the *exercise of the muscles* and we should make use of any aid that makes the active exercise of these muscles possible until they gain sufficient strength to act without the support. There is one other hope in treating partial paralysis in children. Even if a nerve cannot be restored there is so much opportunity, with determined effort, to bring about some measure of adaptation and compensation whereby another muscle or group of muscles will, in a measure, come to the aid of the injured group and make fairly normal motion possible.

We want to speak further of the result of invalidism upon the mental development of these children. In some of these cases there may be a meningitis which interferes with brain function and arrests development, but in most of them perhaps the brain is not primarily impaired and yet the rule is that these children are not normal mentally. To get brain development, stimulation from the periphery is absolutely essential. When we cut off activity, when we limit the things the child sees and hears, and particularly when we limit or eliminate the things which it handles and comes in actual contact with, we limit the stimulations to thought and mental activity; we do not realize the millions of stimuli to the brain which are thus cut off and these stimuli are necessary to brain growth and coordination. The plans suggested by Dr. Bush along this line will prove of incalcuable value and the suggestion we are making of the necessity of peripheral stimulation upon the brain we trust will cause us all who have these cases under our care to see to it that this phase is not neglected.

It may be wondered at by many that a comparatively infrequent disease calls for so long a discussion as this. But we believe the osteopathic profession has a wonderful field opened up to it in the treatment of even chronic cases of this character and we want to consider it thoroughly in connection with the able papers on the subject of muscle exercise, posture, etc., printed in the last and this issue of the JOURNAL. If we will only do our distinctively osteopathic work well and at the same time avail ourselves of the good in other systems, we shall accomplish wonders for the profession as well as for a class which without these methods is practically without hope.

PUBLISHER'S NOTES

THE DIRECTORY

Copy for the 1913-14 osteopathic Directory will be sent to the printer about December 1st. If any member wishes a different address from that to which the JOURNAL is sent, the Secretary's office should be notified promptly. In this connection the applications of all regularly graduated, competent and ethical practicians are desired. Four dollars accompanying the application will pay for membership for the remainder of the current year and will bring all the privileges of membership for that period, including listing in the Directory. Many of these non-members will take advantage of this offer if you will tell them of it. We ought to have 500 new members in the next thirty days.

OFFICIAL EMBLEM

For several years there has been a demand for an emblem for the use of A. O. A. members. After much time and effort, a pin was adopted by the Board. This was displayed at the Kirksville meeting and sold readily, and while orders have been coming in steadily for the pin, only a few hundred have been sold,

whereas as many thousand should be worn by the membership.

The Secretary's office has these pins for men's wear with button-hole attachment and for women with brooch pin, and either will be sent to members in good standing upon receipt of $1.50. It is a very attractive pin in gold and light and dark blue enamel, and has been greatly admired.

BOOKS AND SKELETONS

The JOURNAL has on hand a few copies of two very useful and readable books. "Old Age Deferred," by Lorand, the celebrated Austrian diagnostician, is a very readable and instructive book. We fill orders of this when accompanied by the publisher's price, $2.50. "School Inspection," by Connell, covers the subject thoroughly, and gives much information about this proposition which is now so much discussed. It also gives suscinctly the diagnosis of most infectious diseases. It is a very useful volume. Price, $3.00.

Then we have the little mottoes, Silent Educations; six of them, size about four by ten inches. Laid on the reading table or framed on the treating room walls, they tell a message. the set of six, 50c.

Also, we are filling orders almost daily for the brochure, "Osteopathy Fifty Years Hence." It is an educator, if properly used; it was written by a great lawyer to show business men that they should have osteopathic physicians examine and teach their employees. Price, $1.00 per hundred.

Then there is the rubber articulated spine and skeleton, permitting of normal spinal movements. The spine sells for $30 and the skeleton for $60. We are not able to fill all orders promptly, so you had best order early.

Departments

SANITATION

C. A. WHITING, Sc. D., D. O., *Editor*
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FLIES AND MOSQUITOES—(*Continued*)

It is impossible to write of the dangers of mosquitoes without calling attention to the organism which we have every reason to believe is distributed by this insect. I refer, of course, to the several forms of malarial parasites. It is not improbable that these organisms have played a very important part in the history of animal development. It would be going much too far in the realm of speculation to assert a belief that warm-blooded animals have been developed through the influence of these blood parasites, but it is barely possible that these parasites, or some near relative of them, have been the agents which have changed the history of the world by developing the so-called warm-blooded animals from cold-blooded animals.

There are very few of the lower organisms which are not the victims of blood parasites and in many cases, it is known, that the presence of these parasites results in the production of a fever and that in some cases the fever is destructive to the parasites. Now, it is barely possible that warm-blooded animals have by natural selection been driven into a physiological fever which frees from the danger of many parasites to which they otherwise might be subject. If this is true, there is still a goodly list of parasites which have adapted themselves to the high temperature of mammals and are thus able to live in their bodies despite their high temperature.

The malarial parasites are represented by at least three species: two of these have a cycle of development extending through forty-eight hours. These are the destivo-autumnal parasites or the Plasmodium praecox, the Benign Plasmodium vivax and the more serious Plasmodium malariae. Of these the Plasmodium praecox is the truly dangerous form as this organism is responsible for the most malignant form af malaria. Plasmodium vivax causes the benign tertiary malaria, while the Plasmodium malariae causes the malaria which is intermediate in its nature between the other two.

All of these forms of Plasmodiums must spend a part of their life cycle in the body of the mosquito. It is not known that they ever inhabit the body of any other insect. In the body of the mosquito they pass through their

sexual stage of reproduction and by the mosquito are again inoculated into the human body.

It is by no means easy to recognize all forms of malaria by microscopical examination. The parasite begins to affect the human body when about one red corpuscle in one hundred thousand is infected. This means that the average patient shows signs of infection when he harbors about one hundred fifty million of these parasites. When one considers the enormous number of red corpuscles in the blood, careful calculation seems to show that, if the pathologist finds his parasites at the rate of about one in fifteen minutes, it is about as good as can ordinarily be expected in the early stages of the disease. This means that the ordinary superficial examination which so many physicians make is of little value in incipient cases of malaria.

There is much difference of opinion as to how long an infection of malaria may last. Personally I am inclined to believe that when a person is once infected there is a possibility of the infection lasting during his entire life. It has been suspected that an infected mosquito may transmit its infection to the next generation through the egg, but this suspicion entirely lacks confirmation.

While there are more than sixty species of mosquitoes in North America, there is reason to believe that only one of these is capable of conveying malaria, and these mosquitoes belong to the genus Anopheles. The untechnical observer will most readily recognize the Anopheles mosquito by its curious habit of alighting with its head pointing directly to the wall upon which it rests, while the more annoying non-malaria-bearing Culex mosquito rests upon the wall with its body parallel to the surface. The Anopheles mosquito makes much less noise in flying. The female deposits from twenty-five to one hundred and twenty-five eggs on the water. The length of time required for these to develop into adults is subject to great variation. It is probable that few reach their full development in less than fifteen days.

The male mosquito is a strict vegetarian and is seldom found far from water courses. It is believed that the female mosquito may under favorable conditions live about one month after reaching complete development. When we know that the mosquito must spend its larval period in water, it is not difficult to surmise that the best means of protecting oneself against mosquitoes is to drain all ponds and do away with all standing water in which they develop. Where it is impossible to secure the complete abolition of standing water, the proper course seems to be to cover it with oil, as this effectually prevents the development of the mosquito.

The monetary loss resulting from malaria in California is estimated at nearly three million dollars yearly and it is estimated on good authority that one town in the Sacramento Valley of not over four thousand population suffers a yearly loss of more than seventy-four thousand dollars from this disease. Such figures demonstrate to us the supreme importance of a determined fight being made against a disease which is so easily preventable.

One should not close an article of this kind on the Diptera without referring to the wingless and degraded ticks which are members of this order. They belong to the group which is known as pupipara. This group has received its name because of the fact that the egg is retained within the body of the mother until it hatches, and until the larva is ready to enter upon its pupa state.

The ticks are widely distributed both geographically and zoologically. There are few species of animals which are not infested by them to a greater or less degree, sheep and cattle especially suffer from their ravages. In the Southern States, the business of cattle raising has been most seriously interfered with because of the ticks. Not only do cows suffer because of the blood which they lose, but the pain and annoyance of the tick contributes largely to the unfitness of the cow for either milk or beef. But a careful study of the habits of the tick has made it so that we can say of them as we say of typhoid fever, "that they are more of a disgrace than a misfortune." Already more than one hundred and forty thousand square miles of the South have been freed from this pest.

The life of the tick from the time the egg begins to develop until it is sufficiently matured to begin egg laying is about twenty-one days and the best method of eradicating them has been found to drive cows through a bath containing a solution of arsenic at intervals of not exceeding twenty days. This bath is destructive to the ticks and does the cows no harm.

Not only do the ticks suck the blood of cows and cause them pain, but they are the means of distributing the organism which causes Texas Fever, and strange to say, this organism when in the body of the tick, may be transferred by the eggs to the next generation.

The wonderful success which is attending the efforts to destroy the tick pest is only another evidence of the value of the close scientific study which enables the naturalist to learn the life-history of the form of life he would destroy or control.

Until recently, fleas had been regarded as members of the order Diptera. Just now they are placed in an order by themselves, but they

are so closely related to the diptera that I shall conclude this article by calling attention to the fact that fleas are widely distributed among mammals and that many species of mammals harbor separate species of fleas.

There are at least two disease conditions which are traced to the flea. It seems quite certain that a species of tape-worm, by no means uncommon in the cat, spends a part of its life cycle in the body of the flea and that the cat, by unwittingly swallowing the flea, reinfects itself with the tape-worm.

There is also good reason for believing that the rat flea becomes infected with the Bubonic Plague bacillus when the rat upon which it lives has this disease and that it may, by being transferred to a cat, get upon human beings and in that way transmit the disease from the rat to the people whose house house this troublesome rodent inhabits.

Pacific College of Osteopathy.

HYDROTHERAYP

W. Wilbur Blackman, D. O., M. D., *Editor*
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CHRONIC RHEUMATISM AND GOUT

(*Extracts from Baruch's Hydrotherapy.*)

The cases of chronic rheumatism which have come under my care may be divided for therapeutic purposes into the well-nourished and the anaemic.

In the well-nourished rheumatic subject, full baths of eight to fifteen minutes' duration, in water at 95 degrees, rapidly raised to a higher temperature up to tolerance, usually 106 to 110 degrees, with gentle massage, are the most useful procedure, combined with the internal use of very cold water to stimulate excretion by the kidneys. The patient should receive a prolonged warm bath; with massage during the bath; perspiration should be promoted by a prolonged dry pack in woolen blankets. The elimination of elements of imperfect metabolism is the chief aim of this treatment. The marvelous results from bathing in the hot mineral springs are not attributable, in the writer's opinion, to absorption of the mineral ingredients of the waters, but to the judicious methods of their application by experienced physicians, together with the freedom from business or other cares and the influence of a changed mode of life.

Prolonged hot baths, therefore, followed by sweating in blankets, are useful for robust-looking rheumatic and gouty people. These may be repeated daily, as the physician's judgment may decide. During the interval between the baths, wet compresses at 65 degrees, covered with flannel or wadding, left until nearly dry, may be profitably wrapped around the tender or swollen joints. These may be worn during the night also.

In the ill-nourished sufferer from chronic rheumatism, the hot-bath treatment must be used with great caution. The relaxation incident to these baths and the subsequent sweating procedures are useful, if they be not repeated too often. Twice a week is the maximum number. The debilitating effect may, however, be counteracted by other hydriatic procedures. A daily ablution with water gradually reduced one or two degrees for each occasion, and followed by the procedures as indicated under the caption of anemia, not only counteracts these effects, but tends to raise the vascular tone and with it increase elimination. The lowest possible temperatures and brief duration consistent with good reaction are the acme of treatment for this type of rheumatics. Subsequent wrapping in wet compresses is a useful auxiliary. An excellent mode of managing these depreciated individuals is the dry pack (described later), after which the whole body is rapidly dried and treated to friction, the joints are wrapped in damp compresses at 60 degrees, and the underclothing is resumed. By this method many patients suffering from subacute or chronic rheumatism may be rendered capable of locomotion, their nutrition improved, and gradually restored to health.

This individuality is of prime importance; its disregard has lead to disappointment and sorrow more frequently than has regard for it been crowned with success. As a result of a quarter of a century's observation in private and hospital work, the author has been led to divide his cases of "chronic rheumatism" (so-called) into certain groups for therapeutic purposes.

First—Affection of the larger joints, occurring in persons who have passed through one or more attacks of acute articular rheumatism; more frequent in men than in women.

Second—A slowly developing type, in which one or more joints, usually the knee, ankle, shoulder, or elbow, are gradually invaded. To this type may be added gonorrhoeal rheumatism.

The management of these types may conveniently be grouped together. Hot-air baths and Turkish baths are contraindicated. Demanding considerable exertion, they materially increase local inflammatory action, which is enhanced also by the irritating effect of great heat upon the affected joints and by their depreciating action upon the heart. Especially the Turkish bath in which the patient is forced to breathe very hot air in ill-ventilated rooms has proved disastrous and discouraging in these types. Procedures, on the contrary,

which induce heat stasis are of the utmost advantage. In a comfortably warm room a bath-tub is filled two-thirds with water at 95 degrees. The patient, having had his face bathed with ice water and his head wrapped in a cold wet compress, is carefully placed in the tub. Water from the hot faucet is added until the temperature reaches 105 degrees on the first day, and this is daily increased one degree until 108 or 110 degrees F. is reached. The duration should be five minutes, or less if patient is distressed, but should be increased daily one minute until ten is reached without distress. During this entire period the affected joints or, if very painful, their neighboring structures should receive stroking finger massage. When removed from the bath, patient should be wrapped in a previously prepared hot linen sheet, and without being dried, placed upon three woolen blankets. The latter should be wrapped, with careful avoidance of pain, around the patient, in order to continue heat retention, for an hour, or less if patient be actually distressed. During this pack the face is bathed in ice water, the cold turban renewed, and two ounces of ice water are administered every ten minutes; a window is opened sufficiently to ventilate the room thoroughly, but not reduce its temperature materially.

In intractable cases the author has prolonged this pack after rest and attention to the bladder and intestines. Prior to the removal, the window is closed and the room warmed. Now the blankets and sheet are unwrapped over the trunk. The latter is dried with warm clothes and receives rapid friction with diluted but not warm alcohol. The lower parts are similarly treated. The patient is cautiously turned, and the posterior parts of the body are also dried and rubbed with alcohol, after which he is placed in bed. It is preferrable to prepare this pack on one side of the bed (in home treatment) and thus avoid exertion by simply withdrawing the pack. If this technique has been scrupulously followed, profuse diaphoresis will ensue in the pack. It has been found advantageous to omit the bath once or twice each week and subject the patient to a tonic procedure instead—viz., rapid ablutions of 60 degrees.

These tonic procedures need to be more frequent than the eliminative in cases of decided enfeeblement or great loss of weight. The latter is apt to result in obese patients, in whom tissue change appears to be greatly enhanced by the above-detailed heat-retaining procedures. In this method the flexibility of hydrotherapy is evident, in that the physician is enabled to meet every indication of the case. During the interval between baths a wet compress, consisting of two folds of old linen, should be wrapped around the affected joints and covered snugly with one layer of flannel, secured by pins. This may be renewed every four hours.

Third Type.—This is true gout, of subacute character, sometimes, not often, a sequel of acute gout. It begins with pain and stiffness of the smaller joints, phalangeal and tarsal, and not rarely extends to the wrists, elbows, and ankles. Almost invariably anaemia and general systemic depreciation are manifested. This type is frequently distinguished by neurasthenic complications.

Fourth Type.—This is the so-called muscular rheumatism, which most commonly begins in the loins, as lumbago, and affects later the erector spinae and other dorsal muscles, and sometimes the group of muscles originating in the sacro-iliac region.

When thoroughly established, these types occur so often in depreciated individuals that special care is required in their management. Being usually of subacute character, they bear the Turkish bath very badly; stiffness is sometimes relieved by the sweating and shampooing incident to the latter, but in the majority of cases the relief is transient and the system is greatly debiliated by them. It is unfortunate that these baths are so often prescribed by physicians who thus deliver their helpless patients into the hands of rough men and women who are accustomed to deal chiefly with bon-vivants, plethoric and otherwise healthy or robust persons, or the obese in search of reduction of the waistline—individuals who are capable of enduring their heroic manipulations. In cases of the third and fourth group it is advisable to proceed carefully; beginning with dry packs, as described, to accumulate heat on the skin, followed by rapid ablutions of water, beginning at 90 degrees F. and reducing daily two or more degrees until 60 degrees is reached. With proper precaution against cardiac enfeeblement the above full-bath treatment may be substituted, until the douche method can be procured in an institution.

Rheumatoid arthritis being an incurable disease, efforts to maintain the digestive and assimilative organs, relieve pain, procure sleep, and diminish stiffness are indicated. As in all chronic cases, change of environment, attention to diet and hygiene are important. The effect of these may be enhanced by judicious tonic hydrotherapy. Diaphoretic procedures should be avoided; the skin should be exposed to sufficient heat only to improve reaction for neuro-vascular training, which is very useful in these cases. After an hour's dry pack or a few minutes' warming in a hot-air box, the

patient's trunk should be rapidly treated to ablutions with water beginning at 90 degrees, and daily reduced one degree until 60 degrees or less is reached without chilling. Each part should be dried quickly. The circular and fan douches of low pressures and temperatures not below 80 degrees are useful tonic procedures at institutions or springs possessing hydrotherapeutic apparatus.

Robertson-Blackman Sanitarium.

OPHTHALMOLOGY

Chas. C. Reid, D. O., *Edior,* Denver.

OSTEOPATHIC EXAMINATION OF THE EYE

(Continued)

The case history and family history should be had and inspection of the eye should be made before the osteopathic physicial examination is begun in eye troubles. This will aid us not only in what to suspect osteopathically, but will help in determining the reflexes affected and the interpretation of the effect of lesions found by the examination.

Weak nerves will cause asthenopia. A broken arch, an innominate lesion or a slipped axis may cause weak nerves. The examination, then, in eye troubles should consider the whole mechanism of the body. I have removed many pairs of glasses by building up the nervous system. I have some cases now whose vision I am testing before and after a course of treatment. Dr. F. I. Furry, of Cheyenne, Wyoming, tested some cases of refractive error before, during and after treatment about four years ago. His results were reported in this Journal. He got practically no change in the refractive error from his treatment. His were not cases of astenopia, but of developed refractive errors. The eye ball was either too long, too short or astigmatic. Under present methods I doubt if much can be done in modifying the shape of the eye ball to correct refractive errors. I prophesy there will be a time in no distant future when there will be methods worked out to modify the shape of the eye ball and correct refractive errors. We now have methods of reshaping the nose and of changing facial physiognomy to some extent; the orthordontist changes more or less the shape of the maxillary bones, correcting irregularly grown teeth. If all this is done, why not the opthalmologist develop methods to modify the shape of the eye ball? Until that is done, we must, at least very largely, rely upon glasses for the correction of refractive errors.

In the case of asthenopia, or weak nerves, the case is different. Asthenopia may be greatly or entirely relieved with glasses. One may have all the symptoms of eye strain in this condition. There may be lack of normal vision, blurring, burning and itching of the lids, more or less blepharitis and headaches; one or all of these symptoms may be present. Glasses being worn for conditions of this kind may be readily removed by osteopathic treatment, which corrects the lesion causing the trouble, and builds up a depleted nervous system.

The normal accommodation in the eye, when the nerves are strong, is able to overcome from one to two diopters of refractive error in young people. Osteopathic physicians may frequently remove glasses that are put on to relieve symptoms partially due to asthenopia. Correction of abnormal conditions, except the refractive error, that produce the asthenopia may enable the accommodation of the eye to overcome the refractive error indefinitely. Trouble is more likely to return in thes ecases because of the refractive error.

In July a girl was sent to me by her parents to have her eyes fitted with glasses. They stated that she had been to different oculists and opticians and no one had ever given satisfaction. They said she was all right every other way if her eyes were properly fitted with glasses. They did not want her examined or treated otherwise because she would be well every other way with correct glasses. Her vision was: Right eye (O. D.) 5/20 (metric system); left eye, (O. S.) 5/15 or about ¼ vision in each eye. A + .87 diopter sphere, combined with a + 3.00 diopter cylinder in axis 90, gave her perfectly normal (5/5) vision in each eye.

This gave her perfect satisfaction until she started to school in September. Before the end of the first month she was having trouble with her eyes and was again sent to me by her parents. Her vision was reduced to 6/15 in each eye with her glasses on. She wondered, and no doubt her parents did, if it was not another case of a misfit in glasses similar to all her previous experiences.

This time I insisted upon a thorough physical examination against all protests. The following lesions were discovered: The left innominate was up and back or tilted posteriorly; first lumbar anterior and to the right; sixth and first dorsals to the right. The case was not refracted again. I took particular care in July and I was quite sure the refractive error was corrected. It was all explained to the parents and regular osteopathic treatment was begun. In less than a month (at this writing) practically every lesion has been corrected, her vision is almost normal (5/6) again and she is clear of an annoying backache with which she has been bothered for years. Her nerves were greatly depleted. There is much improvement along that line,

and it has come in ways that were not dreamed of by her people.

Might I not say that this approach to the eye is not dreamed of by medical physicians? Yes, and even the oculists. I have been through medical college and have had three special courses in eye work under oculists, and I have never heard anything mentioned that would indicate any ideas of the logic involved in this case.

Just suppose this case in the hands of an oculist. With the refractive error corrected in July and the patient returning in September with vision reduced from normal to 6/15 with the corrective glasses on, it would have been a round of recorrection and perhaps an effort to build up the nerves for asthenopia. You can imagine the lack of success with the lesions described as the basis of it all left untouched. Surely osteopathy has much to offer in eye troubles that is new and unique.

The osteopathic examination of the eye, then, should begin with the feet, then the innominates, the lumbar, dorsal, ribs and cervical regions.

Just recently I had a case, a young lady twenty years of age, with burning and itching of the eyelids and fronto-occipital headache; some of the prominent symptoms of eye strain. She also had backache in the lumbo-sacral region and was very nervous. She had the following lesions: Righ innominate upward and backward, the spine was slightly anterior in the lumbar region and convex to the right. The dorsal region was convex to the left and the cervical convex to the right. She had muscular tender spots at the right sacro-iliac joint, in the posterior and lower gluteal region, in the right lumbar muscles, in the left dorsal muscles and the right cervical muscles. The quadricepts extensor about four or five inches above the knee was tender; a point about the bicipital groove in front of the shoulder, the forearm muscles and the thenar eminence on the left were tender; this existed to some extent on the right. These are known by many as typical signs of innominate lesions.

Dr. Ethel Louise Burner, of Bloomington, Illinois, gave a talk in Denver in September last in which she emphasized the importance of these signs. She gave Dr. F. A. Turfler, of Rensselaer, Indiana, most of the credit for discovery of the signs. I find some of them present in all cases, and all of them present in some cases.

In the case I am describing there was also a twist between the eleventh and twelfth dorsal; the third dorsal to the right and the third cervical to the right. Her eyes were examined very carefully with and without the use of drops. Vision was normal and no refractive error was present.

The innominate lesion was corrected the first treatment and in two weeks there was no more complaint of the eyes. The third cervical was also corrected. The innominate lesion causing the unbalanced condition of the spine I consider the most important in the causation of her eye symptoms.

Let me be emphatic that where eye symptoms are manifested, we should satisfy ourselves, as a part of a careful examination, that no innominate lesion exists.

(*Osteopathic Examination of Eye continued in next issue.*)

MAJESTIC BLDG.

CORRECTIVE EXERCISES

R. KENDRICK SMITH, D. O., *Editor,* Boston

Although the last word is yet to be spoken on the subject of the therapeutics of scoliosis, the readers of this department will be interested in a very latest pronouncement by possibly the most practical authority in the world today, Dr. Robert W. Lovett, of Boston. In the *Boston Medical and Surgical Journal* of October 30th, Dr. Lovett summarizes the up-to-the-minute treatment of this condition which is so frequently encountered by osteopathic physicians. His paper was read originally at the recent International Medical Congress at London.

As his views emphasize the points so frequently made in this column, it is important that we should all know that our treatment is in accord with the principles established by such an eminent investigator with such a vast experience. This does not mean that our specific treatment is not applicable to this deformity as to other conditions, but merely that our philosophy and our work do not preclude us from recognizing and utilizing truth wherever it may be found. Osteopathy is invaluable in the treatment of scoliosis and we should always use it, but we want the truths of the mechanics of the spine from the othopedic point of view as well.

Dr. Lovett says the prognosis for complete recovering from functional scoliosis under efficient muscle treatment alone is favorable. He advises exercises similar to the "Setting up Drill" of the United States army and unilateral bendings. There is no evidence that functional curves are spontaneously outgrown. They may change to mild structural curvatures.

Functional curves are thus dismissed, and the entire article devoted to structural scoliosis. In the latter class, gymnastic treatment without apparatus is condemned, also retention without exercise. Neither is sufficient alone:

Many a case of fixed scoliosis has been made irreparably worse by being made more flexible by exercise and manipulation without the development of muscular

strength to hold the improved position. * * * Gymnastics are of the greatest value in the milder cases, and in after-treatment of all cases. * * * That braces and corsets are still advertised and sold by instrument makers, and bought by ignorant parents and applied to scoliotic children to their great detriment, is known to you all.

A close-fitting and presentable plaster jacket, says Lovett, can be most easily applied in the upright position. Sayre suspends by the head with heels off the floor. Wullstein uses 250 pounds of traction with the patient sitting strapped to a revolving and tilting stool, with lateral pressure from horizontal rods. Schanz presses his shoulder against the convexity as the plaster is setting, with his arms encircling the pelvis.

The criticism of the prone posture in plaster jacket work is the difficulty of fitting the pelvis. For children there are advantages in having the patient lie in a sling on the side of the convexity (Rich), body weight straightening the curve, and figure-of-eight bandages going over the shoulders. Z. B. Adams and R. T. Taylor have the patient on the back in a hammock, Taylor having the back hyperextended and Adams flat. Comparing these widely different methods, Lovett wisely concludes:

It is probable that the particular technic employed is of less importance, as to the final results, than the skill and experience of the surgeon, the amount of force used, and the efficiency of the after-treatment. But after a trial of all methods, it seems to the writer as if the method of Abbott offered on the whole distinct anatomical advantages and the greatest ease of correction, but the method must be regarded as being to a certain extent still *sub judice*.

Corrective jackets are not satisfactory in lumbar curves or in curves whose apex is as high as the upper dorsal region. Atrophy is quickly recovered from by after-treatment of massage and gymnastics. " A gain in flesh and improvement in the general condition may, as a rule, be predicted from the application of a proper jacket."

The period of active treatment takes from one to two years, and in poliomyelitis cases much longer. Exercise must be in sufficient dosage to develop atrophied muscles, and the jacket gradually discontinued. Relapse results otherwise.

19 Arlington Street.

PERSONAL HYGIENE

XIV

O. E. Smith, D. O., *Editor*, Indianapolis

The kidneys are among the most important organs in the body. Devolving upon them is the duty, in part, of maintaining a normal quality of blood. They are the avenue of elimination of those substances arising from metabolism, which are toxic, and must be removed constantly in order to purify the blood.

Bunge says the kidneys eliminate both crystalloid and colloid, soluable and insoluable, acid and alkaline, substances from the blood. In this way they supervise the blood composition by elimination of waste and keep these deleterious substances from accumlating in the blood to such an extent as to become pathological. They even eliminate those substances that are not pathological, such as sugar and albumen, when these substances accumulate in the blood to excess from foods that furnish more of them than the organism can use at the time. In this way the blood composition is standardized and maintained at a normal potency.

If the blood becomes acid, the kidneys eliminate the excess; if it becomes excessively alkaline, they remove the excess of alkalinity.

The kindneys eliminate the end-products of nitrogenous metabolism, such as urea, ammonia, creatinin, uric acid, xanthin, hypoxanthin; also sulphate and phosphates from the proteid foods, as the sulphur and phosphorus are oxidized. The indol, skatol, phenol and cresol are formed in the large intestine as a result of bacterial putrefaction. They are eliminated, in part, in the feces, but in part are absorbed into the blood, and after oxidation are conjugated with sulphuric acid and eliminated in the urine.

The process of conjugation is valuable from a physiological standpoint, as it converts substances having an injurious action into harmless compounds.—*Howell.*

Phenol is a violent poison, but the phenolsulphate does not exert toxic effects.—*Bunge.*

It seems that the transformation of phenol into phenolsulphate takes place in the liver, and so long as this conjugation is taking place, normally, there is no danger of poisoning, but in case this conjugation process becomes impaired, it is exceedingly important for the kidneys to eliminate the unoxidized phenal to avoid autointoxication.

Cystin is another sulphur compound excreted by the kidneys, but never found in normal metabolism. Bunge says this compound does not dissolve readily in water, is found as a sediment, and sometimes formes vesical calculi. There are some people who secrete a large amount of the sulphur of their bodies as cystin, without exhibiting any evil effects from it. The larger part of the sulphur is oxidized into sulphuric acid.

Sulphocyanic acid, secreted by the salivary glands, is eliminated from the blood by the kidneys to eliminate the unoxidized phenol to this compound in the organism.

Oxalic acid is a normal product of the system on a mixed diet, especially of vegetables.

Imperfect oxidation of food products occurs in certain diseases, as jaundice, diabetes, scrofula, etc. The lime salt of this acid is insoluable in water, and when the oxalate is precipitated, vesical calculi occur. To keep the oxalate in solution depends mainly on the acidity of the urine.

When we get a comprehensive idea of all the toxins eliminated by the kidneys, an estimate of their danger to the organism is quickly seen. Unless this means of eliminating toxic substances, which are constantly arising from normal metabolism is kept free and active, renal autointoxication will arise.

The epithelium of the kidneys is a secreting structure and when the secreting power of the epithelium becomes impaired, then the elimination of waste becomes impaired. When this epithelium becomes swollen and edematous as in scarlet fever, Bright's disease, etc., the walls of the kidney tubules become impermeable, then uraemic poisoning symptoms set in, such as convulsions, dizziness, blindness, delerium, coma, etc.

Bouchard has studied the subject of urine toxicity very carefully, and he points out the fact that uraemic patients are those whose urine has lost its toxicity.

The editor of Bouchard's lectures says:

> Numerous experiments made by later writers have confirmed the statement just made that the urine of eclamptic women loses its toxicity owing to the retention of poisons in the blood and failure of the kidneys to eliminate these by the urine. In a series of researches on the toxicity of urine in pregnant women, Chambrelent and Bois found a marked decrease in the toxicity of the urine beginning with the second month of pregnancy, a decrease which they believed to be due to functional hyperactivity on the part of the liver, for, should hepatic inadequacy by any means arise, the toxicity of the urine invariably increases. So long as the toxicity of the urine is at its maximum, the individual is free from the risk of autointoxication. In the permeability of the kidney to poisons, there is safety.

Bouchard himself says:

> Uraemia is to me, I repeat, intoxication by *all* the poisons which, normally introduced into or found in the organism, ought to have been eliminated by the renal path, and are prevented from being so by the inpermeability of the kidneys.

We may regard the symptoms arising from renal insufficiency as results or reactions from the afferent impulses aroused by the toxins contained in the blood. The blood stream comes in contact with all the sensory nerve terminals, peripherally, and also all the nerve cells, centrally; hence, ample opportunity is afforded for the toxins circulating in the blood stream to arouse afferent impulses, which are converted into efferent impulses and manifest the pathological vital phenomena.

It is evident that the treatment indicated is that of securing normal permeability of the kidneys to the toxins in order that such waste may be eliminated from the system.

In seeking for a natural diuretic, produced by the organism itself, the nitrogenous end-product, urea, is perhaps the best known to physiologists. By securing a normal production of urea, the permeability of the kidney is aided and thus elimination of toxins is increased.

We quote from Bouchard:

> We can also utilize as a medicament a body which has been considered, until today, a poison, and which is capable more than any other of encouraging the secretion of urine. I am now speaking of urea, to which we certainly cannot attribute the accidents of uremia, and which on its own side, even combats them by forcing the renal barrier. In animals urea has been experimentally demonstrated to be a diuretic. * * *

In order for urea to become available to the kidney, it is necessary for the liver to be functioning normally, as it is in the liver that most of the urea is formed out of carbonate of ammonia. By producing normal nerve impulses and good circulation to the liver, the metabolism in the hepatic cells will create the normal quantity and quality of urea and thus aid in establishing permeability in the kidney and thus eliminate the toxins arising from general metabolism.

Water and milk are also splendid diuretics, and aid in eliminating poisons by furnishing the liquid vehicle necessary to transport the toxins to and through the kidneys.

In regard to the administration of digitalis for renal insufficiencies, Bouchard says:

> Apropos of digitalis, I cannot refuse to tell you that this medicine ought not to be indifferently employed at all periods in diseases of the kidneys. When the function of the kidney is impeded, it is prudent to use only with extreme caution certain medicines. When the impermeability of the kidney has become such that it ceases to have the power of eliminating toxic substances formed by the organism, there is then retained the medicinal substances; the kidney is impermeable for therapeutic poisons as for natural poisons, and the employment of toxic medicines, in similar cases, has no other effect than to bring about an association of medicinal intoxication with a uraemic.

If the medical physician decries the use of medicinal remedies, in renal insufficiency, it ought not to be a hardship for the osteopathic physician to refuse to use a drug.

Instead of a drug, which is almost certain to add to the aberration of renal activity, we have a much more sane, harmless and efficient means at our command in removing all lesions which interfere with the normal nerve impulses regulating cell metabolism and blood pressure in the liver and kidney. By normalizing, or even augmenting to excess, by mechanical stimulation, the nerve impulses going to these

organs, we can use nature's own mechanism and energy to create physiological activity in these organs and thus insure the establishment of healthy vital phenomena.

It may be noted in passing that the impulses aroused by mechanical stimulation of the spinal areas over the kidney and liver are afferent impulses.

Bouchard himself recommends the use of mechanical stimulation of the nervous system in renal insufficiency. He says:

> Sometimes we are obliged to stimulate the nervous system by irritating its cutaneous branches by friction, in order to obtain, in a reflex manner, a quickening of the renal circulation and consequently an increased secretory activity of the kidney. I am convinced that, in many cases, cutaneous friction increases urinary secretion.

Now, if this celebrated Frenchman can understand and advocate the use of mechanical stimulation of the nervous system for renal insufficiency, and that only to the extent of a skin reflex, how infinitely more ought the osteopathic physician, with a knowledge and power to influence distribution to muscles, ligaments and joints, advocate and demonstrate his power to influence most favorably the renal functions in a most satisfactory manner.

Traction Terminal Bldg.

Current Comment

Chas. C. Teall, D. O., *Editor*, Fulton, N. Y.

ORIFICIAL SURGERY

In the early days of osteopathy we were held up to ridicule by the medical press because of our so-called extravagant claims as to what we could accomplish by treatment and without drugs, so it is with some joy that we hail any system that make our so-called impossibilities look modest as the dew brimmed violet in a grassy copse of a bosky dell.

Such an one is the *American Journal of Orificial Surgery*, first six copies sent by Dr. McConnell.

Early osteopaths will recall Dr. Pratt and his espousal of the theory of osteopathy and it is his idea of nerve impingement and perversion at the orifices that makes us have a certain amount of philosophy in common. The orificial surgeon is not afraid to claim what he believes. Here is a report, in part, of some cases:

> The case to which I refer is that of a boy about eleven years old, who was taken sick on the street and brought into the house in a sub-conscious condition, suffering, apparently, from a violent attack of syncope. * * * This condition, in a modified state, went for months, and I might say for a year, and the best physicians of this city were consulted by your humble servant; but the boy was not relieved. He would stand up anywhere, in the presence of anybody, and would pass the right leg over the left and hold it there as long as he could, then relax and try it again. When this spasm would strike him he would do this (illustrating throwing one leg over the other).
>
> As I studied that particular action, I concluded there was something wrong with the reflexes of the spinal column. I returned to the spinal column, examined it up and down, couldn't find anything wrong. My wife says to me, "Did you examine the ears?" * * * I took an ear speculum, inserted it well down into the orifice of the ear, grasped a pair of large forceps, such as is used in the nose, and going carefully into the opening, I withdrew a hard substance the size of a common field pea, thus liberating the pressure on the sympathetic nerve within the said ear. To the surprise of all, the right leg relaxed immediately and today he is a big husky fellow, weighing a hundred and seventy-five pounds, well and doing business up in this man's great city.

Here is another that will bring back memories to the older osteopaths:

> If we take just one line, one method of curing our cases, we will often be disappointed and fail. Some years ago a man, seventy years, came to my sanitarium. He had been coughing for more than twenty years. It was an irritable, harrassing, bronchial cough, from which he could get no relief. His chest was long and ill-shaped; his whole body was emaciated. I placed a large Parker cup over the left chest, covering the second, third and fourth ribs, including part of the sternum. There was in those parts a depression of the ribs. I produced considerable suction there, when suddenly a rib snapped. It frightened the man. He said, "You have broken a rib." I thought I had, and I had some difficulty in convincing my patient that the breaking or bringing his ribs to a normal position was necessary. But the strange part of it all was the patient reported the next morning that he had coughed only a few times during the night, slept well and had a good appetite for breakfast. Instead of remaining for treatment two or three months, as I had expected, he left in about a week, without any cough and apparent cured. I saw his son a few years afterwards. He said his father was in good health.
>
> Again, a lady came to me with a bad case of hemorrhoids and a bad bronchial cough. I told her that after the operation possibly the cough would cease. She said, "Doctor, don't try to stop my cough. My father died with a cough like this and other relatives had the same kind of bronchial cough. There is no use trying to help it. You may do what you wish for my other troubles." Soon after the operation for hemorrhoids, the cough which she had had for years was cured permanently. This ilustrates the idea I want to convey, namely, the importance of correct diagnosis—finding out the real cause of the affliction and then treating accordingly.

Under the title of "Publicity," Dr. Pratt has this to say concerning our old friend, the discoverer of reflex action:

> This man Abrams did not know anything about it when he came here last summer; but he is progressive and is certainly furnishing a plank for the platform of the Progressive Medical Party. At the same time he had studied the sympathetic nerve only down as far as the base of the neck. He did not know anything about the influence of orificial dilatation over respiration and over the capillaries; did not know that it deepened respiration, and from that, started circulation of the blood. He did not know that you could take a fellow, as we did yesterday, and by appealing to his pelvis, could change the color of his blood; did not know that you could slow the heart's action and

regulate blood pressure. He knew you could slow or quicken the heart's action by thumping away at the spine; could gradually reduce an aneurism, gradually reduce an enlarged thyroid, and do lots of good, especially in the way of diagnosis. But the wonderfully regenerative processes of mind and body and all that can be accomplished by appealing to the pelvis, struck him like a thunderbolt. I gave him reprints of the book of 1895. This book of yours was not out. I would like to get one for him, and he wants to work this out for himself. He wants original observations. He is thoroughly in earnest. I don't suppose he would dare join hands in this work; he is not far enough along yet. Electricity had to be trampled upon before the profession received it. Hydrotherapy had a hard time coming to the front; suggestive therapeutics had to wait until half the practice of doctors was taken away by mental healers, before the profession would recognize there was any such thing as suggestive therapeutics.

This reads well with what we quoted last month from Abrams' most recent observations along this line. At one of the clinics reported, Dr. Pratt gives the following, which is going some:

They said this thing was an old exploded theory. I told them I never claimed a discovery, but an illumination. This was at the Grand Pacific Hotel at the Annual Meeting of the Illinois Homeopathic Association. There was present as a private patient, a farmer from Iowa, afflicted with caries of the metacarpal bones of the right hand. The hand was badly swollen. Pieces of dead bone had been coming out for a series of years. The fingers were so swollen that they could not be approximated. I said to him, "Will you let me show your hand to this crowd?" "Certainly, doctor." He took off the bandage and I said, "Gentlemen, is there a surgeon present who will dare promise to save this man's hand? Would you not consider it good surgery to cut off this hand in order to save the arm? I have not examined his pelvis at all, but I would like to have you appoint a committee to see me treat this case." Well, a committee was appointed as requested and saw me operate on that man orificially, and in twenty-four hours, his hand was down to nearly normal size. I never touched him but once and he went on to complete recovery. Do you think the committee ever reported? I am sorry to say it did not. How they welcomed TRUTH at that time!

In one issue, Dr. Curtis Muncie has an article on "the Relation of Osteopathy to Orificial Surgery," which is a good exposition of the former. He says:

Let us compare the philosophy of orificial surgery with osteopathy. Do not orificial surgeons also consider structural derangement the underlying cause of disease, through interference with normal circulation and nerve energy? Are not rectal papillae, pockets, hemorrhoids, scar tissue of the cervix uteri, redundant clitoris, different forms of structural derangements which produce functional disorder?

"Free the sympathetic terminals of their impingement and vaso-motor equilibrium will ensue." Is not this principle one and the same as that of Dr. Still, who, when speaking to a graduating class, said, "As an engineer you see friction, as a philosopher you conclude there is obstruction, and as a mechanic you remove the obstruction, by so adjusting the tissues that there is no pressure upon artery, vein or nerve."

The two philosophies appear to be the same in general, except that the one looks for the lesion at the nerve center at the spine, while the other looks for the lesion at the nerve terminals.

Since our theories for the cause of disease are so closely related, can we obtain satisfactory results if either the orificial or osteopathic lesion be neglected? Can the human machine run without friction if only a part of its deranged structure be adjusted? * * *

To get best results in a given case, not only should the primary but the secondary cause of the disease be removed as well. Neglect of this, I believe, to be the secret of failure in many orificial cases. It is not orificial surgery's failure, but nature needs the entire irritation removed, and this is the osteopath's work.

This is sane reasoning and the result of years of observation of the effects of orificial and osteopathic work, but Dr. Pratt is not pleased with moderate claims, like most extremists, and comes back at Dr. Muncie rather savagely if not very convincingly:

The most important fact in orificial conditions is entirely overlooked by Dr. Muncie, namely, that irritation in the mucous lining of the pelvic outlets induces tonic spasms of the enclosing sphincters. These sphincters are supplied by the sympathetic nerve, and the unremitting spasm of these puckering strings wastes the sympathetic nerve force in two ways; first, by the nerve waste involved in long continued muscular contractions (for it takes nerve power to make a muscle pinch tight), and, second, from the fact that it is pinching unduly sensitive, because pathological spots in the mucous membrane which lines the sphincter-guarded openings. Indeed, were it not for these oversensitive and irritable patches in the mucous membrane, there would be no undue contraction of the encircling sphincters. This steady pressure upon the sensitive nerve terminals of the sympathetic system drains the sympathetic reservoir of life, after the same manner that the electricity in the storage battery is spent when an electrical button that rings a bell or turns a wheel, is pressed and held.

To be sure, the effects of depleted sympathetic force may be gone so far that the correction of the irritability in the mucous membrane which lines the pelvic outlets, and the relaxation of the sphincters may be insufficient to completely re-establish the normal condition of the circulation at nerve centers. In such cases, osteopathy or any other form of appeal that will tend to increase the activity in these spinal centers will be helpful as finishing work. But Dr. Muncie will scarcely find a chronic case of spinal congestion needing the application of osteopathic methods of appeal in which, before this is undertaken, it would not be well to correct in the first place, the orificial condition which alone would permit the chronic congestions induced by over use, to become chronic. The orificial work should come first, thus stopping the drain of the sympathetic nervous energy, and if this is not sufficient to clear up all spinal congestions after the elapse of a reasonable length of time, and always carrying the orificial work, by proper after treatment to a proper completion (that is, where there is no longer any irritation of the mucous lining of the outlets and no undue tension of the sphincters which guard them), then is the proper time to employ osteopathic or other measures that will clear up what is left of the congestion of the nerve centers.

There is no difference, practically, in the action of orificial work upon the bones and ligaments and muscles than upon the rest of the organs and tissues of the body. An orificial appeal involves a flushing of the capillaries universally wherever capillaries go, and the influence of the orificial appeal is felt throughout the capillary system, including the hard tissues as well as the soft ones.

One thing this shows conclusively, and that is the lack of knowledge of osteopathic philosophy by the writer of such sentiment. He is forever putting the cart before the horse—effect before cause. We will grant much that is said for orificial irritation and the wonderful effects from its removal, but we cannot subscribe to its being a cure-all.

SCIATICA AND ITS TREATMENT

This appeared in the *Medical Record* by E. L. Hunt and it must be good stuff, for the *Journal of A. M. A.* bit at it and this is how it was served boiled down to its readers. We can imagine that a multitude of sufferers from this painful ailment have secured relief by following his specific directions for treatment:

SCIATICA.—So far as concerns medication, Hunt says, the list of drugs tried in sciatica is very large. In those cases in which no marked cause is discoverable, methylene blue has been recommended. Castor oil is another favorite; it is always of value, as it seems to reduce the congestion and remove the toxemia. Large and repeated daily doses of strychnin help by increasing the resistance, improving the nutrition and toning up the nervous system. The most important thing of all is to keep the general health of the patient as near perfect as is possible. To bring about this result, resort should be had to nerve foods, tonics and stimulants. The glycerophosphates, strychnin and alternatives are of use.

Diet is a detail which, Hunt states, has never received sufficient attention. Any patient who is suffering acute pain and on whose nervous system great and constant demands are made, requires a large amount of food, and nourishment of a kind which is both stimulating and fat producing. A part of the treatment of every sciatic should, therefore, consist of a diet in which fats predominate. He should have milk, cream, eggs, butter, marrow, bacon and oils, mayonnaise dressing, and cheese. He should have frequent feedings between meals in addition to three regular and large meals. Forced feeding is almost as essential as rest. The principal foods which are contraindicated are those abounding in the proteids. Therefore meats, especially the red meats, must be eaten sparingly. Alcohol should be interdicted. Large quantities of water aid in two ways, by tending to improve general nutrition and by flushing out the kidneys. An excellent plan is to give these patients half an hour before each meal a large cup of hot water into which has been poured one of the glycerophosphates. A practical point to bear in mind is, that no sciatica is cured until Lasegue's sign can be elicited without giving pain.

There are a certain number of long standing and intractable cases in which no cause can be discovered and in which no treatment has helped. These patients suffer a great deal of pain and a great deal of inconvenience. The best way to manage such patients is to make a complete change of their environment, to get them away from home and friends, to give them a nurse, and to treat their general health. Such patients should be given to understood that time is the most important factor in their care and that many methods will have to be tried. In these cases, Hunt advises a treatment consisting of rest, the saline injections, and building up of the general health.

In the light of modern knowledge on the subject, this sounds pretty crude, coming from a man of his standing. We would suggest that an hour could be profitably spent by him over the writings of Cabot and of Greene, who have found out some things about it.

The editor of the *Journal of Advanced Therapeutics* was stirred to his innermost consciousness by reading it, whereupon he seized his pen and dashed off a leader, of which this is an excerpt:

SCIATICA AND ITS TREATMENT

In a recent number of the *Medical Record* appears a leading article by an Instructor in Nervous Diseases in one of the leading medical colleges, on "Sciatica and Its Treatment." The author has treated well the pathology and etiology; but treatment, as given by him, offers very little for encouragement for relief, and no assurance of a cure of the condition.

In fully ten per cent. of these cases in males, and a larger number in females, the pain is due to pressure of an enlarged prostate or subinvoluted congested or fibroid uterus. The relief of these cases depends upon the removal of pressure by the treatment with reduction of the enlarged viscus. This is readily accomplished by the X-ray applied above the pubis in uterine fibroma, or by application of the static wave current applied in the rectum for treatment of a subinvoluted or congested uterus or an enlarged prostate.

Sciatica arising from sacro-iliac luxations, the so-called Goldthwaite's disease, are only amenable to relief by treatment of that condition, for which the same measures—the static modalities—are employed. * * *

The prognosis which this writer gives would be very unsatisfactory to the patient if he were to state to him what he has declared in the paper. It is very unfortunate that at this time when there are ways of treating sciatica successfully, with relief of most early cases in a few days, that the (?) with the use of electricity and know nothing of methods and effects of the static current, as have been known and taught for the past twenty years, should investigate it. It is a source of regret that there is no disposition at the present time on the part of many gentlemen in similar positions to that of the writer of the paper under consideration to investigate or recognize the later developments in the use of this current. When a professor will tell his class that these cases (sciatica) will be profitable, because they will keep coming to see the physician, but will not be cured, it is the duty of those who understand the successful methods to do all in their power to extend the knowledge to those who teach as well as to the student.

Pretty good, and one more count for electrotherapeutics in its fight for recognition from the pillites, vaccinationists and serumists.

Along this line comes the meditations of Dr. Blanchard in the *Journal of Clinical Medicine*, under the title of—

SOME THINGS THAT BAFFLE US

A patient comes into the office complaining of backache. He has tried all the home-remedies he knew of. He has plied his back with mustard-plasters and a lot of other plasters bought at the drug store. He has swallowed box after box of "liver-pills" and guzzled by the quart teas that kind neighbors guaranteed would cure him; but, for all that, the troublesome symptom persists. And now, at last, he has come to you, the doctor, after trying as long as possible to avoid you, and he wants you to cure him of this "misery in the back."

From his attitude, his stooped position, the putting of hands over a spot somewhere on his posterior aspect, you are directed to the location of his trouble.

If you do as is usually done, you say, "Humph, lumbago. Here, take these," and without hesitation hand him a few of your favorite diuretic tablets, perhaps add a few "liver-hustlers," then cheerfully bid him good-day, chucking his dollar into your left-hand pants-pocket, to furnish company to like or lesser companions you have collected to help lubricate your way through life. However, if you have an inquiring mind, you might do well to ask yourself whether you have done all you could or should have done for this patient with "a misery" in his back.

If I had happened along just then, as I chance to happen along now in this journal, and you had asked me, I should have said this: "Pardon me, doctor; but, really it seems to me you have not given this man a fair run for his money." Then we should sit down and have a little talk; and the substance of that talk I want to present now.

He then delivers himself of the following bit of wisdom, which is to furnish the basis of treatment:

Lumbago is a symptom of acidosis. In some cases it is made worse by motion, other patients feel improved after moving about. The first thing in every instance is, to aid the elimination of waste. Open the bowels thoroughly with the aid of the old-fashioned blue mass and soda, or, if you prefer, use any of the vegetable cholagogs. I have prescribed also with good results castor oil, which seems to have some peculiar beneficial influence upon all forms of neuralgia in some individuals. Wash out the blood with alkaline drinks, adding colchicine, and also morning drinks of lithium citrate or other lithium salt. From the very start, I pay strict attention to intestinal antisepsis and antifermentation treatment. For his purpose, I use the three combined sulphocarbolates in large doses, and, before meals, effective doses of the antacid powder, sodoxylin.

Sometimes I add to these measures vibration over the lumbar region, also the galvanic current (positive pole to back and negative distant), winding up with a few surges of the sinusoidal, for good measure. I have never been able to see any good from the high-frequency current in this affection, although some recommend it highly, just as some recommend almost anything psychological.

If there is pain so severe that you feel obliged to relieve it, the hyoscine-morphine-cactoid tablets are as good as anything; albeit I have seldom found it necessary to treat these cases symptomatically. Get after the cause, and your symptoms will attend to themselves.

Such local treatment as cupping, counter-irritation, and so on, may do some good, especially mental good, but I doubt whether it helps the condition itself. One old doctor said to me that he made it a rule to use "fly-blows" liberally, and thus made the skin so sore over the painful part that it made the victims forget the original trouble! There may be something in this —who can say?

ABOUT SCIATICA AND OTHER NEURITES

What has been said of lumbago holds good for most of the neuralgias and sciatics. There is also a neuritis frequently encountered which, for want of a better name, let us call musculospiral nerve-neuritis.

Of late years, however, I am using about the same medicinal, electrical, and vibratory treatment as with lumbago, to which is added vigorous massage manipulation, such as our friends the osteopaths might employ.

All this class of neurites and neuroses are of toxic origin. The general plan of treatment is, to aid elimination, give antacids, and clean out and keep clean. Dr. L. F. Lewis, of Akron, Ohio, recently said to me, "I can cure most of my patients with saline laxatives, intestinal antiseptics, and sodoxylin," and in a measure I quite agree with him. So will you, if you have worked along this line and given up the old plan of masking symptoms with symptomatic treatment.

The following is from the *Journal of A. M. A.*, and knocks the last prop from under the uric acid diathesis which has been the sheet anchor of the M. D. in explaining the why of rheumatism and neuritis:

URIC ACID

To the Editor:—Please name the diseases in which uric acid plays a definite role.

H. J. Lehnhoff, M. D., Lincoln, Neb.

Answer.—Uric acid is generally held to have some relation to the pathogenesis of gout. Urates are deposited about the joints in this disease, and in the early part of a gouty attack the excretion of the urates into the urine is less than the average. At a later stage, a larger quantity than normal is generally excreted. It is not settled, however, that uric acid plays an etiologic role in the case of gout. No definite relation of uric acid to other diseases has been established.

What would diet and elimination amount to if the cause is not a constitutional one, but structural?

All these ideas, opinions and complicated procedures, which, by the way, do not include the therapeutic lamp, violet ray, nor Kendall's spavin cure, can point to cures, and every osteopath knows how like magic the adjustment of an innominate will, in recent cases, give relief.

The writer has just had a number of cases which responded in from one to five treatments. One of months' duration, in an old lady of 78, weighing 190 pounds. She had immediate relief and continued as long as the ilium was in place. Her son suffered for months, he did not "inherit it" from his mother, and was cured by electricity after a long course of treatment. His pelvis is still badly twisted. Why does he not have the pain? Answers may be sent to the address of the editor of this department.

Correspondence

POSTURE AND HEALTH

Dr. Ella Mosher in her book, "Health and Happiness for Girls," makes some valuable suggestions regarding correct posture.

The following is an adaptation osteopathically applied. If disease follows malalignment and if malalignment follows faulty posture, then while the osteopath is working to correct the malalignment, why not insist that the patient shall help the good work along by correct standing, walking and sitting, insofar as that is possible. At least the patient's efforts along these lines should tend to strengthen muscles and ligaments.

The main point to keep in mind, according to Dr. Mosher, is the position of the hips. Given a properly held pelvis and the rest of

the body tends to fall into correct lines because of the mechanics of bodily balance. Let the innominate bone be roughly represented by a triangle with spine fastened near one apex and femur joined near another, the crest of the ilium being the third apex. As the ilia tip forward, the spine must needs follow and the bodily balancing forces the various structures into normal position, or at least an approximation of the normal. Conversely, if the ilia tip backward, all the structures tend toward abnormal curves in order to maintain the balance.

Prove this yourself by taking the following

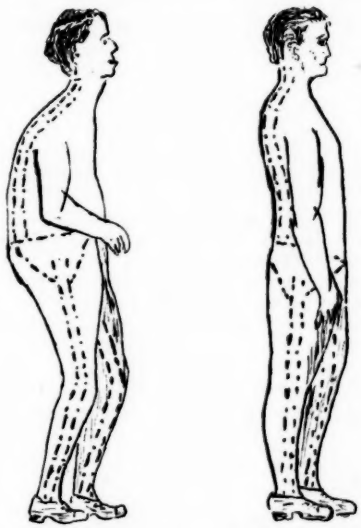

Fig. 1 Fig. 2

Triangle roughly represents the three points of the innominate bone: upper left corner, sustains weight of body; upper right corner, crest and attachment of anterior muscles of trunk; lower corner, insertion of femur, representing sustaining point from below.

postures, keeping hands on crests of ilia to note change of position:

(A) Wrong Posture.

Stand with hands on crests of ilia and let the hips slump backward. This is what must happen:

1. Occiput anteriorly placed;
2. Chin sticks forward;
3. Neck curves anteriorly;
4. Dorsal curve accentuated (post dorsal);
5. Ribs approximate anteriorly;
6. Chest flattens;
7. Lung space is lessened; therefore—
8. Lungs cannot expand properly;
9. Lumbar spine becomes posterior;
10. Abdomen tends to prominence;
11. Knees crook;
12. Weight falls upon the heels;
13. Arches of feet tend to flatten;
14. Consequently your whole body spells SLUMP and you will look something like Figure 1.

(B) Right Posture.

Stand with one foot slightly in advance, toes straight ahead and throw the hips forward. This puts the weight upon the balls of the feet. Get a good balance by swaying forward and back a few times, meanwhile saying, "Head up, Chin in." As you do this, you find that the following position must be assumed:

Neck straightens;
Shoulders straighten;
Ribs are pulled upward;
Chest expands, and therefore—
Lungs expand at once;
Lumbar spine tends toward the normal curve;
Abdomen recedes;
Knees straighten.

The muscles of calf of leg contract and pull on the structures of the foot, thus tending to raise the arch of foot to straighten it. Your whole body now spells ENERGY, VIM, SELF-RELIANCE, for you look like Figure 2.

The same law holds in sitting and walking. Also for correct carriage of the shoulders. Forget about the shoulders, but remember three simple rules: Hips forward, head up, chin in, and the shoulders will be normal.

ANNA L. HICKS.

CAMBRIDGE, MASS.

THE PRESS BUREAU

As instances of the kind of work the A. O. A. Press Bureau is doing, the following two cases are cited:

The following letter was published in the three principal newspapers in Boston following a most disgraceful murder by a Swedish gymnast, who was announced in big headlines as a "debonair Beau Brummel osteopath:"

READING VICTIM NOT AN OSTEOPATH

To the Editor of the *Post:*

SIR:—As the *Post* stands for justice in this community, the American Osteopathic Association expects the editor will be glad to publish this correction of an unintentional injustice in this morning's report of the unfortunate tragedy in Reading, Mass.

Your reporter refers to the victim as an "osteopath," and the word "osteopathy" appears conspicuously several times. The records of the State Board of Medicine show that this statement is incorrect. On the contrary, he was the author of a pamphlet attacking osteopathy. The laws of this state are very strict regarding the regulation of the practice of osteopathy and provide that one cannot enter upon

that practice without passing all the examinations before the medical board and thereby becoming a registered physician.

The unfortunate Reading man was neither a physician nor an osteopath. We feel sure the *Post* does not wish to let its readers infer that a masseur can practice osteopathy in this state any more than he can practice medicine. Respectfully,

R. KENDRICK SMITH.

BOSTON, October 13.

A half page advertisement of a new chiropractic college was removed from a high class monthly magazine called the *Colonial* as a result of the following letter written to the President of the Society which publishes the magazine:

I wish to most earnestly protest against the Society of Colonial Families countenancing an illegal business by permitting the advertisement of "Chiropractic" to be published in the *Colonial*. I was shocked to see it there. The laws of Massachusetts and other states require physicians of any and all schools, including osteopathy, to pass examinations before they are allowed to practice. This "chiropractic" business is merely a method of evading the law. If you will read the advertisement you will see that it does not state the length of time required to complete their course of study. It is lowering the dignity of the magazine to contaminate the advertising pages with the exploiting of an illegitimate and illegal enterprise. I shall be glad to answer any questions you may have regarding this matter. The Supreme Court of New York only last week convicted a practitioner of this school on the ground that he was practicing without a license. We are taking similar proceedings here against these people. I do not like to see your journal publishing the advertisement of people who will be convicted of violation of the criminal laws of this commonwealth.

R. KENDRICK SMITH.

LOOKING TO THE FUTURE

The really practical man is the one who "dreams," that is who thinks ahead of his work, so that he is always prepared for what comes next, and is always ready to go right on without a break. The trustees of the Research Institute regard that a good business principle, and want to avoid being caught unprepared. Their present duty of using the funds, represented by the property in Chicago and the invested endowment, to the best advantage in the work the profession expects of the Institute, is not all of their duty. They should think ahead of the present so as to be ready for expansion as circumstances may permit.

At the last annual meeting the trustees took action to formulate a tentative statement of what might be considered as the maximum requirements for such an institution as osteopathy should have to bring out its fullest possibilities. As the work of the Institute divides naturally into four divisions, four committees were appointed to prepare a statement of what these divisions should comprise, as follows:

Educational Department—E. R. Booth, J. L. Holloway, E. M. Downing.

Research Department—W. Banks Meacham, D. Webb Granberry, J. Deason.

Hospital Department—F. E. Moore, S. A. Ellis, L. L. Haight.

Admission Department—O. J. Snyder, C. B. Atzen, Geo. J. Helmer.

With the ultimate goal of our ambitions outlined in the reports of these committees, the successive steps in the expansion of the Institute and its work may be taken always with reference to it, in a systematic and orderly development.

Such a statement of our purposes is desirable for present use as well. In case people of large wealth becoming interested in our endowment enterprise, we should be prepared to show that we have a definite purpose in view, and tangible plans for achieving that purpose. Something like this will happen sometime, and when it comes we do not want to be unprepared.

C. M. TURNER HULETT, D. O.

BOOK REVIEWS

DIET LISTS OF THE PRESBYTERIAN HOSPITAL, NEW YORK CITY.—Compiled, with notes, by Herbert S. Carter, M. D., Assistant Visiting Physician to the Presbyterian Hospital, Associate in Medicine at Columbia University, Etc. 12mo of 129 pages. Philadelphia and London, W. B. Saunders Company, 1913. Cloth, $1.00 net.

The Diet Lists contained in this volume have been prepared primarily for use in the Presbyterian Hospital, New York; subsequently the comments on the different diets were added, for while the indications for the use of most of the diets is self-evident, the explanatory notes add to the completeness of the presentation and may be found useful to some readers. The author does not contribute any new theories of diet, but merely presents certain diets and the principles governing their use from a purely clinical standpoint. The busy physician can quickly prescribe a special diet by using these lists as a basis and modifying them to suit the particular needs and idiosyncrasies of the patient.

MASSAGE: ITS PRINCIPLES AND TECHNIC.—By Max Bohm, M. D., of Berlin, Germany, with an introduction by Charles F. Painter, M. D., Professor of Orthopedic Surgery at Tufts Medical School, Boston. Octavo of 91 pages, with 97 illustrations. Philadelphia and London, W. B. Saunders Company, 1913. Cloth, $1.75 net.

The beneficial effect of massage is much more fully appreciated in Germany than with us, because of its wider application. What is needed before we can reap the full advantages of this method of treatment is a more widely diffused and personal knowledge on such matters. The technic as described in Dr. Böhm's little book is essentially that practiced in Hoffa's clinic. The book is well illustrated with many clear photographic cuts.

Among the Societies

CALIFORNIA.—At a recent meeting of the newly appointed Examining Board, W. W. Vanderburgh, D. O., of San Francisco, was elected President to serve until January, 1914. Dr. Vanderburgh and Dr. D. L. Tasker have been the osteopathic representatives on the Board for several years.

The first examinations held by the new Board will be in San Francisco, the second Wednesday of January, 1914. At a meeting to be held in the mean time, however, the Board will take up the question of reciprocity, there being about 500 applications from all schools of practice over the United States.

IDAHO.—At a recent meeting of the Idaho Association, W. S. Kingsbury of Boise was elected President; Vice-Presidents, F. P. Smith, Caldwell, and Charrie Freeman, Boise; Secretary, H. W. Sawyer, Twin Falls; Treasurer, Mabel Fouch, Parma.

ILLINOIS.—The Third District Association met with E. M. Browne in Galesburg, October 22nd. M. H. Bigsby, recently of Philadelphia, gave an interesting and instructive address on Osteopathic Technique, especially treatment applicable to patients who are sick in bed.

Following this an experience meeting was held. E. M. Bowning of Macomb told of treating a great many cases of typhoid fever in which he had succeeded in breaking the fever within a week. All present gave interesting experiences of practice. The December meeting will be held in Galesburg and will be followed by a banquet.

The Chicago Association held its regular meeting, October 2nd, at Sherman Hotel, when H. H. Fryette gave a review of the Physiological Experiments he saw performed at the International Congress of Physiologists at Groningen, Holland, during his visit to Europe last summer.

INDIANA.—The annual meeting of the Indiana Society was held in Indianapolis, November 5th. One of the features of the meeting was clinics limited to ten minute demonstration of Technique, no papers: "Diabetes," F. H. Smith, Kokomo; "Sciatica," J. E. Derck, Fort Wayne; "Brachial Neuritis," H. L. Landis, Elkhart; "Ear Troubles," J. E. Baker, Brazil; "Eye Troubles," K. T. Vyverberg, Lafayette; "Asthma and Hay Fever," E. C. Crow, Elkhart; "Prostatitis," O. E. Smith, Indianapolis; "Rheumatism," C. R. Weaver, Decatur.

J. Deason of Chicago discussed "Review of Research Work and Its Practical Value." Under general clinics and round table, "Splanchnoptosis," J. B. Kinsinger, Rushville; "Constipation and Impaction," Bert L. Coon, South Bend; "Pelvic Troubles," M. E. Clark, Indianapolis.

IOWA.—The Third District Association held its tenth annual meeting in Keokuk, October 30th. Among the subjects discussed in addition to the presidential address by C. J. Chrestensen were "The Effect of Environment on Cell Growth," J. S. Baughman, Burlington; "The Value of Laboratory Diagnosis," E. H. Henry, faculty A. S. O., Kirksville; Demonstration of "Treatment and Technique," W. O. Pool, Fairfield.

The program was followed by a dinner and business session.

The First District Iowa Association held its regular meeting at Cedar Falls, October 13th. The program included discussion of "Professional Ethics," Ruth M. Wright, Charles City; "Legislative Work," T. C. Stevenson, Cedar Falls; "Early Diagnosis and Treatment of Tuberculosis," M. R. Kitson, Osage; "Our Short-Comings," F. B. McTigue, Charles City. The next meeting will be held in Waterloo in December.

LOUISIANA.—At a meeting of the Board of Osteopathic Examiners held in New Orleans, October 24th, forty applicants to practice osteopathy in the state were granted license. At a business session of the Board, Paul W. Geddes of Shreveport was elected President and Henry Tete and J. W. Roussel of New Orleans were re-elected respectively secretary and treasurer.

MARYLAND.—The Maryland Association held its eighth annual meeting in Baltimore, October 18th, in the director's room of the Fidelity & Trust Company, Fidelity Bldg., through courtesy of former Governor Warfield.

The attendance was unusually large, and great interest was manifested. The new members taken into our society were: Hedley V. Carter, J. R. Northern, C. H. Croxton and Louise D. Shuman.

The most important feature of the meeting was the drafting of an Osteopathic Bill by a committee appointed for the purpose. The bill was read by the chairman of the committee, H. McMains, and after discussion, adopted as amended. It will be presented at the meeting of the legislature in January.

The following officers were elected for the coming year, viz.: Alfred M. Smith, Hagerstown, President; Eleanor R. Dashiell, Annapolis, Vice-President; Harry C. Osborn, Baltimore, Secretary and Treasurer.

Arthur M. Flack of the Philadelphia College gave some valuable advice during the discussion of the bill.

Following the meeting, Dr. Flack gave a talk on "Pathology in Practice" which proved of great interest and value to all.

A banquet was held in the evening at the Pennent Hotel. Dr. Flack again spoke along the legislative lines. The points were timely and invaluable to all present. Dr. C. H. Croxton, one of our new members having returned to us, gave an interesting talk on "Echoes of the A. O. A. Convention."

HARRY C. OSBORN, D. O., *Sec'y.*

MASSACHUSETTS.—At a recent meeting of the Boston Society, the following officers were elected: President, K. L. Achorn; Vice-President, Helen G. Sheehan; Secretary-Treasurer, John A. McDonald; Curator, George E. Smith; Director, A. F. McWilliams.

MICHIGAN.—The fifteenth annual meeting of the Michigan Association was held in Detroit, October 28th and 29th, when the following officers were elected: President, O. O. Snedeker, Detroit; Vice-President, F. J. Harlan, Flint; Secretary, Kate Miller, Port Huron; Treasurer, B. L. Hayden, Flint.

H. H. Fryette, Professor of Technique in the Chicago College of Osteopathy, discussed "The Pelvis," and demonstrated his methods of correcting disturbances in this region.

J. Deason, Director of the Research Institute of Chicago, addressed the meeting, discussing the findings of research work, and was followed by M. E. Clark, of Indianapolis, in a well received address.

B. L. Hayden of Saginaw has been appointed by the Governor to membership on the State Board of Osteopathic Examiners, *vice* R. E. McGovock, resigned.

MINNESOTA.—The Southern Minnesota Association held its regular meeting, November 8th, with Lily F. Taylor, of Northfield, and carried out the following program: "Diet in Health and Disease," E. J. Stoike, Austin; "The Business Side of Our Profession," R. F. Weeks, Owatonna; "Osteopathic Research," J. Deason, Chicago; "Goitre," E. W. Hawkins, Red Wing; "Technique of Cervical Region," W. H. Bedwell, Mankato; "Field Experiences," J. Y. Ernst, Faribault; "Office Experiences," J. W. Hawkins, Luverne; "Report of A. O. A. Meeting," C. W. Young, St. Paul; "What Osteopathy Can Do in Nervous Diseases," J. Deason, Chicago.

MISSOURI.—The regular meeting of the Northwest Missiouri Association was held at the Coates House, Kansas City, Missouri, October 9th. An interesting program was carried out; Dr. A. G. Hildreth, of St. Louis, was present at the evening session, and gave an interesting talk on the new Sanitarium at Macon, Missouri. Much enthusiasm was shown.

The new officers of the Association elected are: J. L. McClanahan, Paola, Kansas, President; Wm. H. Beets, St. Joseph, Vice-President; Zudie P. Purdom, Kansas City, Secretary and Treasurer.

ZUDIE P. PURDOM, D. O., *Sec'y.*

MONTANA.—At the recent meeting of the Montana Association, C. L. Marshall, of Livingston, was elected President; Martha Arledge, Lewiston, Secretary-Treasurer; W. C. Dawes, Bozeman, Trustee.

Among the subjects discussed were "The Prostate Gland," C. L. Marshall; "Adjusting Old Subluxations," Asa Willard, Missoula; "General Considerations of the Therapeutic Uses of Diet," G. H. Townsend, Chico Hot Springs.

NEW JERSEY.—The state society began its regular monthly meetings with a session in Newark, on November 8th, William S. Nicholl, of Philadelphia, discussed "Osteopathic Treatment in Diseases of the Eye." Guy Wendell Burns, New York City, discussed the Osteopathic Law in New Jersey, giving the experience of the profession in New York City in attempting to enforce the law regarding the unlicensed and unqualified practitioners.

At a recent session of the Board of medical examiners, the irregular practitioners who are unable to qualify under the law appealed to the Board from its decision which had refused to recognize their alleged college work. It will be recalled that the law gives the osteopathic member of the Board the right to say which osteopathic colleges are entitled to recognition. The irregulars made their protest against Dr. Granberry's decision against them, but his action was upheld by the Board, the President of which made a long public statement justifying the position taken by the osteopathic member.

NEW YORK.—The Western New York Osteopathic Association held its first meeting in Buffalo, October 11th. C. M. Turner Hulett, of Cleveland, was the speaker of the occasion,

his subject being "The Lesion in Development." Robert T. Cook delivered a talk with latern illustrations upon "Technique of Bedside Haemanalysis." W. W. Steele gave a demonstration of Technique. The meeting was well attended.

The speaker at the meeting November 12th will be L. von H. Gerdine, who will lecture upon "Diagnosis and Treatment of Common Lung Diseases."

The annual meeting of the Rochester District Society was held at the Rochester Club, November 8th. Dinner preceded the meeting, following which Ralph H. Williams read a paper on "Treatment of Flat-Foot and Kindred Disorders," and C. M. Bancroft gave a demonstration of the use of adhesive plaster in the correction of disorders of the feet and ankle.

Officers elected for the coming year were: President, F. A. Crofoot, Lyons; Vice-President, R. E. Breitenstein, Rochester; Secretary-Treasurer, C. M. Bancroft, Canandaigua; Directors, C. D. Berry, A. D. Heist, R. C. Wallace.

Ohio.—The Ohio Society will hold its annual meeting in Columbus, December 30th and 31st. The program committee is planning to have a series of practical demonstrations in technique of diagnosis and treatment, distinctly osteopathic; a poll of the members over the state having shown that this is what the great majority want.

Geo. Laughlin will do several orthopedic operations; J. D. Edwards will demonstrate his nose and throat work which was so interesing at the last national meeting; F. C. Farmer will tell of the latest developments in research as it relates to our technique and prognosis in cases; J. H. Long will demonstrate surgical diagnosis, and a number of the members of the society will demonstrate interesting phases of their work in which they are particularly successful.

L. A. Bumstead, D. O., *Sec'y.*

The Dayton District Osteopathic Society met with O. G. Stout for the November meeting. M. M. Dill, of Lebanon, O., discussed "Physical Diagnosis." O. G. Stout demonstrated "Technique." Attendance was good.

Oregon.—Readers of the Journal will recall that in a recent number it was announced that J. A. Van Brakle, D. O., had been appointed health officer of Clackamas County, Oregon. This came about through the fact that the M. D. incumbent of the office had been declared incompetent by the State Board of Health, whereupon every other medical man in the county seat declined to serve and proposed to force the county judge to reappoint the disqualified member. The judge solved the difficulty in which the medical men thought they had placed him by appointing J. A. Van Brakle. Then they all were sorry and went up in the air.

Recently they have secured a decision from the Attorney General to the effect that Dr. Van Brakle is not eligible to fill the position under the law. This opinion, however, will not be recognized by the osteopathic profession, who will take the matter to the courts, and perhaps the supreme court of the state will decide the question as to whether osteopathic physicians can qualify under one technical expression in the law. The newspapers and public sentiment in Oregon City appear to be with Dr. Van Brakle in his contention that he is entitled to fill the place.

Court decisions covering the position as to whether osteopathy is the practice of medicine will be welcomed if sent to Dr. J. A. Van Brakle, Oregon City, Oregon.

Rhode Island.—The Rhode Island Society held its annual meeting in Providence, October 11th. Almost every member in the state was present and the meeting was devoted exclusively to the business of the organization. Officers were elected as follows: President, Niles Brown, Providence; Vice-President, H. M. Hutchins, Providence; Secretary-Treasurer, W. B. Shepard, Providence; Trustees, C. H. Wall and Lydia H. Wright.

Washington.—Drs. Potter and Richart were hosts to the King County Osteopathic Association October 21st, when the yearly programs were begun with a large enthusiastic attendance.

Interesting reports were given by Drs. Wm. Waldo, Arthur Cunningham, and A. B. Ford, delegates to the recent National Convention.

Annual election occurring, the following officers were chosen: President, A. B. Ford; Vice-President, L. N. Hart; Secretary, Hattie Slaughter; Treasurer, Nelle Evans; Corresponding Secretary, Roberta Wimer-Ford.

Great Britain.—The British Society held its annual meeting in London, September 27th, and the following program was presented: "Experiences in Zurich," Caroline L. Paine, Los Angeles; "Muscular Contractures," Elmer T. Pheils, Birmingham, England; "Clinical Experiences at Los Angeles," Barbara MacKinnon, Los Angeles; Address, Ira Frame, Philadelphia, Pa.; "Osteopathic Technique, What I Saw at the A. O. A. Convention," discussed and demonstrated, Franklin Hudson, Edinburgh; "What Will Help the Osteopath in His Work," W. J. E. Dillabough, London.

The officers elected were: President, Jay Dunham, Belfast; Vice-President, Georgiana G. Watson, London; Secretary-Treasurer, E. H. Barker, Liverpool. A special meeting will be held in London, Easter week, 1914.

Notes and Personals

GOOD PUBLICITY

The Buffalo (N. Y.) *Sunday Times* of October 18th printed a lengthy and apparently very well written article on Osteopathy. The JOURNAL is informed that a limited number of extra copies were prepared and that these may be had at the rate of 5c per copy. Many members of the profession should be able to make use of these papers as showing the recognition that osteopathy has received when so large a paper will give four or five pages of space to an article covering this school of practice. Orders, accompanied by the cash, should be sent to S. W. Dawes, Care *Buffalo Times*, Buffalo, New York.

ELBERT HUBBARD EMBRACES CHIROPRACTIC

After the very flattering articles this well known writer has recently sent forth regarding osteopathy, one would hardly expect to find going out over his name, a thirty-two page pamphlet lauding as highly as he does everything he undertakes, what he calls "The New Science." According to Hubbard, the National School of Chiropractic (Chicago) is its home and J. F. A. Howard its prophet.

As one reads the article it is really hard to tell whether the thing is done at Hubbard's expense as a boost of himself or at the expense of the prophet of the new science, for Hubbard talks of himself until he gets to the fifteenth page. Then he mentions chiropractic and from then on he divides the space with Howard and this National School.

Hubbard works up to his subject apparently apologetically and really seems sorry to have to let you know what his is getting at, but unless he did let you know, the fee wouldn't be forthcoming, so on page fifteen he gives eight rules for health, the last of which reads: "Then if you should have ailments, consult a chiropractor," etc.

It is interesting to note that according to Hubbard this "New Science" is "made in Germany." He goes on to tell of how common spinal survature is and then says that "over one hundred years ago certain German physicians discovered in almost every disease there was a wrong adjustment of the spinal column. They began to work on it by means of manipulations and this manipulation was given the name of chiropractic—*chiro* being the Greek work for hand, and *practic* meaning that the method was practical, necessarily, helpful." Hubbard goes on and tells of the many virtues and qualities that a "good chiropractor" has, but he doesn't venture any estimate, so far as we have been able to find out, just how many such there are. But he tells of having experienced their treatment himself and he is glad to bear testimony to its being both "new" and "science."

Those who have believed in Hubbard's sincerity will perhaps get a serious shock if they see this pamphlet.

THE APPENDIX USEFUL

Dr. Perrier, of the Academy of Sciences, Paris, has just made public the discovery that the appendix excites the activity of the intestines and he says that it should not be removed except in cases of absolute necessity.

> "After experimenting on animals, with their appendicies removed as in human beings, Dr. Perrier discovered that the secretions of the gland had a strong effect on the intestinal muscles and makes a strong plea that the Academy should suggest to French surgeons that they cease from performing appendix aperations for any but urgent reasons."

It has come be a common practice in this country that every time, for whatever purpose, an abdomen is opened, the appendix is removed. Sometimes high-class surgeons succeed in removing it from wealthy people two or three times. This being the case, it would be a dangerous thing for Dr. Perrier to show his face in America. The treatment Friedmann recently received would be tame compared with it. It perhaps would be more like the uproar at Ephesus when the Apostle converted the people from the worship of the Goddess Diana and thus threw a bomb into the camp of the silversmiths.

DR. FECHTIG'S HOUSE

If any osteopathic physician will visit this institution at Lakewood and see the real serious painstaking work done, and especially the results secured, he will wonder that the profession has not better supported it. It is easy to ascertain by watching the treatment and becoming acquainted with the patients, that routine treatment, which is the bane of most institutional work, is not followed here.

Dr. Fechtig is as thorough-going an osteopath as any this side of Dr. Still and he has every reason to be when se sees the success of osteopathic treatment under the most favorable conditions and that really is the point we often overlook, that much of our work is unsuccessful because conditions are unfavorable to it. Some of our work is really correction of what might be called gross structural displacement, and to do this or to attempt to do it, when the patient is up and attending to his business, is not giving osteopathy or the operator who attempts it justice. If our other institutions of this character are as thoroughly osteopathic as this one is, it is unfortunate for some of the patients under the

care of most of us that we do not succeed in placing them where they can have treatment and secure results which we cannot secure under home and business environment. If we can't cure them they will likely fall into some sanitarium or hospital and are thus lost to osteopathy. They come back from one of our institutions loyal to us and praising osteopathy.

FOOD COMPANY RATING

Thompson's Malted Food Company appears to be canvassing the osteopathic profession in the interest of selling its stock as an investment. Within the last few weeks, the JOURNAL has received many inquiries as to the financial standing of the firm. Personally, we know nothing of it. We advertised its food a few years ago, but have never advertised its stock as an investment. The commercial agencies give it a poor rating. The JOURNAL is informed also that the company has declared one or more persons who claim to be representing it fraudulent. The JOURNAL would suggest, therefore, that members of the profession might do well to investigate the company through their local banks before investing heavily. In making this statement there is no wish to do it any injustice, but the ratings given by the commercial organizations would call for care before placing money in its securities.

A GOOD LOCATION

A well known woman osteopathic physician who has been located for several years in one of the best Colorado towns finds it desirable on account of the effect of the elevation upon her health to change her location. She reports it as an ideal field for a man and his wife or a brother and sister, as the work is too heavy for one, but hardly sufficient to maintain two offices. Excellent field for one qualified to do minor surgery. If any of the JOURNAL readers are interested, they can be put into correspondence with this party by writing the JOURNAL.

DR. EDWARD'S NEW OFFICES

J. D. Edwards is now located in Century Bldg., St. Louis, where he has fitted up offices to handle every surgical interference relative to the eye, ear, nose and throat. He also has access to the best hospitals in St. Louis and will handle his major surgical work accordingly. He expects to give his entire attention to this specialty and is meeting with continually increased success in the treatment of partial deafness.

PERSONALS

Lawrence M. McCoy announces the disolution of partnership with Dr. Richardson, and that he will continue the practice in his present location, Paule-Gale-Greenwood Bldg., Norfolk, Va.

O. S. Trigg announces the purchase of the practice and fixtures of J. B. Schrock, of Broken Bow, Neb. He will continue the practice there.

Marie Thorsen has returned to practice at the Wright and Callender Bldg., Los Angeles, after spending six months or more in Europe.

Charles M. Lusk, Jr., has recently passed the Texas Board and is located in Carter Bldg., Houston.

C. A. Dodson, of Little Rock, Ark., recently lost by fire his house, including furniture, library, fixtures, etc.; about half covered by insurance.

MARRIED

Dr. Gwynne Holmes Yoder to Miss Inez Harding, at Friend, Neb., October 8, 1913.

Dr. Frank Fowler Jones and Miss Mary Tucker Callaway, of Macon, Ga., Nov. 8, 1913. At home, The College Hill, after December 1st.

BORN

To Dr. and Mrs. E. J. Favell, Superior, Wis., September 30th, a son.

DIED

At his home in Bloomfield, N. J., October 23rd, Dr. Edward B. Underwood, of New York City. Dr. Underwood was one of the early graduates at the Kirksville school and has practiced in New York City for about fifteen years.

In Huntington, L. I., November 5th, Dr. Herman E. Hjardemaal, of Brooklyn. Dr. Hjardemaal was one of the first graduates of the Northern Institute and had practiced in Brooklyn seventeen years. He was well known and highly esteemed. From the newspaper reports he appears to have been studying metaphysical subjects and a note left states that he was taking his own life in order to test the principle of immortality.

At her home in Rockford, Ill., Ella H. Robie. Dr. Robie had always been active in her professional work and at the time of her death was president of the Rockford Osteopathic Society. This organization adopted appropriate resolutions commemorating her many good qualities both as physician and woman.

At New Haven, Conn., on October 8th, Dr. Forest Crowley. For a number of years Dr. Crowley was connected with the faculty of the A. S. O. at Kirksville.

In the German Hospital, Philadelphia, Mrs. Eva Woodruff, wife of Dr. Charles W. McCurdy, of Philadelphia, following surgical operation for bowel obstruction.

At his home in New Rochelle, N. Y., on October 3rd, in the 68th year of his age, Mr. J. R. Benson, father of Dr. L. R. Bensen of the above address.

APPLICATIONS FOR MEMBERSHIP

ARIZONA

Bradbury, Chas. C. (SC), 117 W. Monroe Street, Phoenix.

CONNECTICUT

Shambaugh, D. Allen (A), Coleburn Bldg., Norwalk.

KENTUCKY

Wilson, Claude (A), P. O. Bldg., Central City.

MONTANA

Hawkes, Chas. L. (A), Tod Block, Great Falls.

NEW HAMPSHIRE

Gove, John McClure (Mc), 780 State St., Concord.

NORTH DAKOTA

Stetzer, Emma M. (DMS), Kenman.

OHIO

Pheils, Ervin H. (A), 2nd National Bank Bldg., Toledo.

PENNSYLVANIA

Baily, Raymond W. (At), Franklin Bank Bldg., Philadelphia.

Cassell, M. E. (Ph), 1530 Chestnut St., Philadelphia.

Eroh, Calvin (At), 606 Swede St., Norristown.

Hawes, Wm. F. (Ph), Mint Arcade, Philadelphia.

Lidy, J. Henry (Ph), 22 So. Centre St. Pottsville.

Powell, Marion J. (Ph), Bann Bldg., Coatesville.

Sixx, Isabella Gordon (Ph), 1524 Chestnut St., Philadelphia.

Turner, Thomas E. (A), Land Title Bldg., Philadelphia.

Turner, Nettie C. (A), Land Title Bldg., Philadelphia.

CHANGES OF ADDRESS

Alkire, Margaret M., from Palestine, to 201 West Missouri Street, El Paso, Texas.

Bashaw, J. P., from North East, Pa., to 213 Olive Street, West Palm Beach, Fla., for the season.

Bissonette, Corene J., from Los Angeles, Calif., to 700 West 180th Street, New York.

Bowlby, Doris P. Jones, from 201 West Missouri Street to Mills Bldg., El Paso, Texas.

Bryan, Charles T., from Philadelphia, Pa., to 421 East 17th Street, Santa Ana, Calif.

Caruthers, Iva M., from 242 Hunter Street to Bank of Commerce Bldg., Peterboro, Ontario.

Cave, Drs. Edith Stobo & Francis A., from Brookline to 151 Sandwich Street, Plymouth, Mass.

Clark, Clayton N., from Caldwell, N. J., to Faribault, Minn.

Conklin, Hiram Lewis, from 93 Howe Avenue to 29 Grove Terrace, Passaic, N. J.

Cook, Herbert T., from San Antonio, to Sweetwater, Texas.

Cummings, W. S., from Ocean Grove to 6 Clifton Avenue, Lakewood, N. J.

Dietz, Phineas, from 26 to 27 New Street, Newark, N. J.

Dillabough, W. J. E., from New York City to 8 W. Halkin Street, Belgrave Square, London, England.

Doe, Albin H., from 526 Wisconsin Street, to 523 Main Street, Racine, Wis.

Dole, Almeda Goodspeed, from Post Office Bldg. to New Bank Bldg., Winnetka, Ill.

Fulton, George H., from Stuart to Arcade Bldg., Danville, Va.

Gable, Clyde A., from 4545 Evanston Avenue to 4545 Broadway, Chicago, Ill.

Gaylord, W. A., from Kenton, to St. Marys, Ohio.

Gilmore, S. J., from Sandersville, to Burch Bldg., Dublin, Ga.

Hardin, Mary McCormick, from Sterling, Colo., to Inavale, Nebraska.

Herman, John C., from Magnetic Springs, Ohio, to 20 Valucia Avenue, Daytona, Fla., for the winter.

Hough, Clara E., from 95 Kings Road, Brighton, London, to 3 Norfolk Sq., Brighton, Birmingham, Eng.

Ingraham, Elizabeth M., from St. Louis, Mo., to 121 Bayard Place, Jacksonville, Fla.

Keiningham, Robert R., from Tampa, Fla., to 1335 North Eden Street, Baltimore, Md.

Kretschmar, Howard, from Trude Bldg. to Powers Bldg., Chicago, Ill.

Leweaux, Virginia V., from Albany, to Corvallis, Oregon.

Lyons, Clara Rauch, from 1322 North Ridgeway Avenue, to 1512 Summerdale Avenue, Chicago, Ill.

Marshall, Elizabeth J. B., from 237 E. 10th Street to 326 W. 8th Street, Erie, Pa.

Moore, Ernest Melvin, from Tuscola, Ill., to First State Bank Bldg., Livingston, Mont.

Osgood, Lizzie E., from Los Angeles, Calif., to 150 North Street, Pittsfield, Mass.

Pherigo, Nora B., from 983 S. Third Avenue to 942 S. Fourth Avenue, Louisville, Ky.

Phillips, J. Marshall, from Leitchfield, Ky., to De Soto, Mo.

Richardson, Martyn L., from 208 Paul-Gale-Greenwood Bldg., to 508 Paul-Gale Greenwood Bldg., Norfolk, Va.

Robuck, S. V., from Kirksville, Mo., to Goddard Bldg., Chicago, Ill.

Rose, C. A., from Humboldt, Tenn., to Canton, Ill.

Schoolcraft, Charles E., from Minneapolis, Minn., to 338½ South Hill Street, Los Angeles, Calif.

Soush, F. M., from State Bank Bldg., to Care Hamiston Hospital, Worthington, Minn.

Stewart, W. A., from Shelbyville, to 112 S. Locust Street, Pana, Ill.

Stoltenberg, Anna L., from Townsend, Mont., to Brunswick, Mo.

Sweet, B. V., from Camden to Rockland, Maine.

Tetz, Walter J., from 215 E. North Avenue to 11 Virginia Avenue, Baltimore, Md.

Thompson, W. H., from Breckinridge, Mo., to 946 Main Street, Riverside, Calif.

Treichler, C. Landis, from Logan, Kans., to Corry, Pa., succeeds to the practice of Anson C. Greenlee.

Tucker, Ernest E., from 35 Madison Avenue to 344 W. 85th Street, New York City.

Weed, Loring, from Boston, to Mercantile Bank Bldg., Salem, Mass.

Weeks, C. H., from Kansas City, Mo., to Box 7, Caney, Kans.

Wilke, Geo. C., from Leadville, to Fort Collins, Colo.

Wright, Lucy A., from 609 Riverside Drive, to 540 W. 122d Street, New York City.

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